

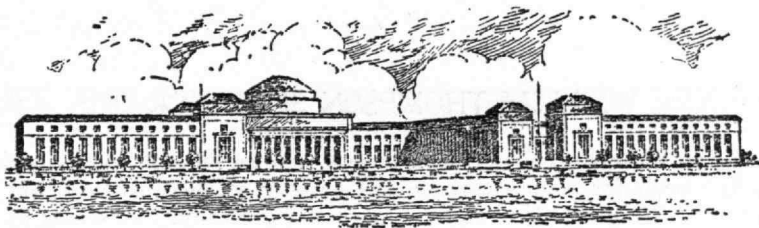


ERNEST FOX NICHOLS
President of the Institute

technology review

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ERNEST FOX NICHOLS

THOSE of the Alumni who were present at the Memorial Service to Dr. Maclaurin at the All-Technology Reunion last June remember, perhaps, with keenest pleasure the eloquent, kindly, human address by Ernest Fox Nichols upon the life and personality of his dead friend and colleague. Fellow teachers of physics at Columbia, both men left that school, one upon the heels of the other, to positions of administrative responsibility, Dr. Nichols to Dartmouth and Dr. Maclaurin to the Institute. Dr. Maclaurin gave his life to that work; Dr. Nichols, after a few important years at the New Hampshire college, returned to his chosen work in pure science. And now the Institute has called him to take up the work his friend laid down a year ago, and he has accepted.

Beyond and above the natural feeling of pride and satisfaction that the Institute has secured a leader who, by calling, by reputation and by experience, is eminently fitted to carry on our great work, we have in these days that other pleasure, elusive, almost irrational, the source of which lies in the old intellectual fellowship and personal comradeship of the two men. Dr. Maclaurin spoke highly of Dr. Nichols. In a way it is as if his hand still guided us, in this last opportunity for service, to the choice of the man on whom his mantle was to fall. We are glad to welcome Dr. Nichols as our leader, not merely for his own sake but for the sake of his friend and ours.

WILLIAM THOMPSON SEDGWICK

WHEN Professor Currier died, over a year and a half ago, a person who had been for a long time in the employ of the Institute, not a member of the instructing staff, remarked regretfully, "It seems as if Technology is losing, with these older men, a kind of personality, of individuality, of humanity, that we do not see in the younger men who are taking their places. The younger members of the faculty are competent teachers and even distinguished scholars, but, somehow, they seem all cut from one pattern, and not a particularly interesting pattern either. They seem sapless. They lack the personal charm, the broad humanity, the knowledge of the past and the humanities and the arts, the *juice of life*, which some of the older men had."

If ever that characterization of the older generation of teachers applied, it was to Professor Sedgwick. He was a distinguished scholar and author, an eminent teacher, a great pioneer in his chosen work of Public Health, an enthusiastic and unwearied servant of the *res publica*, the service of the state, busied, like Martha, about innumerable things, but never neglectful of the things of the spirit.

He was in length of service the dean of the faculty, and in that unofficial but important capacity he never failed to impress on those of a later generation the charm of his personality, as well as his kindly interest in everything pertaining to Technology, of which he was the staunchest and most faithful of servants. To him, as he said after Dr. Maclaurin's death, Technology was a great ideal, demanding and deserving the sternest devotion and the most ungrudging effort. He could conceive of no happier death than that met in her service. And now his own life, too, is laid a sacrifice upon her altar. He might have retired years ago; he knew for years of that disease of the heart which was to conquer him. But he would not give up. He died in harness as he would have wished.

There is a fine phrase that best expresses an almost obsolete thing. "Gentleman and scholar!" It comes down to us from the days of the aristocracy of the intellectual life, as the finest expression of the finest force in the world. Scholar, teacher, scientist, all these — but also humanist, man of letters, impregnated with "the best that has been thought and known," the true culture which transcends time and place. To the defence of that ideal have rallied for ages the most glorious company of the apostles. And yesterday William Sedgwick took his rightful and eternal place, no mean place, in those memorable and splendid ranks.

LIFE AND WORK OF WILLIAM THOMPSON SEDGWICK

BY SAMUEL CATE PRESCOTT, '94

Professor of Industrial Biology, Massachusetts Institute of Technology

WILLIAM THOMPSON SEDGWICK, Ph.B., Ph.D., Sc.D., LL.D., Ph.B., Sheffield Scientific School, 1877; Ph.D., Johns Hopkins University, 1881; Sc.D., Yale, 1909; LL.D., University of Cincinnati, 1920. Professor at Massachusetts Institute of Technology since 1883.

In the ebb and flow of busy life that courses ceaselessly through the halls and laboratories of Technology one who is now lost to us has been for many years a beloved and conspicuous figure. Like our great presidents who have died at the very summit of their devoted and epoch-making service he too passed on in the full current of splendid activity, leaving a record of his loyalty, unblemished character and constructive service which will ever stand as his most enduring monument, and as an example to those who shall carry on the torch of learning and the banners of civilization and devotion to the welfare of our common country.

William Thompson Sedgwick was born at West Hartford, Connecticut, December 29, 1855, the son of William and Anne Thompson Sedgwick. He was descended from Robert Sedgwick, first of the name in America, who settled in Boston in 1636. Reared in the beautiful farming region of West Hartford and Farmington, he early developed an intense love of nature and a keen appreciation of the phenomena of living things which determined in later years the profession he would pursue.

After a preparatory course at the Hartford High School he entered the Sheffield Scientific School in 1874 to take the course in biology in preparation for medicine and was graduated in 1877. In his undergraduate days he clearly showed the exceptional qualities which in after life determined his success in the larger world in which he was destined to become so marked a figure, his personality, character and attainments making him a leader in his class not merely in scholastic standing but in those other fields of student activity which play such an important part in college life. He is described by one of his intimate companions (Professor E. B. Wilson of Columbia University) as "a cheery and even jovial companion, endowed with a keen sense of humor and with that equally precious and saving gift of fortune which he himself was fond of calling 'horse sense.' One cannot, indeed, think of Sedgwick's personality apart from these traits, which never failed him, then or in later life. Equally characteristic was a sane and good-humored optimism, of which he seemed to possess an inexhaustible store. Like the rest of us, he may have had his moments of despondency; if so they were never perceptible even to his closest intimates. His mere presence

radiated a buoyancy and good-will that were an infallible antidote for low spirits or morbid imaginings; and he was a generous, never-failing friend, whose brotherly love helped many a man across the difficult places in life. It is no wonder that 'Sedg.' was a general favorite among his college mates, none the less so when in the small rivalries of undergraduate life they sometimes found themselves far out-distanced by him. He took a leading place in his studies without apparent effort, and not less surely became one of the leading spirits outside the classroom by virtue of qualities that won for him not only the liking but the respect of both students and instructors.

"Prominent among one's early memories of him are his intense love of nature and his delicate literary gift. He was country-born and bred and never lost his affection for the New England hills and woods through which he loved to roam. Of these experiences he knew how to write with a charm of style and warmth of feeling that was at first surprising to one who had thought of him as concentrated on the technical aspects of science. He was one of a small group of enthusiastic amateur botanists who devoted much of their spare time to the collection of plants in the neighborhood of New Haven, sometimes wandering as far afield as the Meriden Hills, and who afterwards published a list of the plants of this region in the name of their college fraternity. In this undertaking, encouraged and aided by the genial professor of botany, Daniel C. Eaton, Sedgwick took a leading part. It involved some hard work, but I doubt whether the rivalries of football, rowing and other college sports were ever pursued with a keener sporting instinct or brought larger returns in the way of health and happiness than did those rather strenuous tramps among the Connecticut wilds." It was during these happy days that he met Miss Mary K. Rice who later became his wife and helpmeet for many happy years, and whose gracious personality and admirable intellectual and social qualities have ever endeared her to the many generations of Professor Sedgwick's students at Technology.

Primarily intending to devote his life to the practice of medicine it is little wonder that the studies which most attracted him were general biology, physiology and physiological chemistry. Especially was he influenced by Professor Brewer, one of the pioneers of the Sheffield Scientific School who for more than forty years occupied with grace and distinction the chair of agriculture, and whose remarkable gifts as a teacher found their happiest expression in the renowned course on stock breeding wherein he introduced students to the great fundamental aspects of heredity and evolution as they were understood at that time. Of this course Professor Wilson writes:

"These lectures were much appreciated by many generations of Yale students, and in our time gained added piquancy outside the classroom from Sedgwick's lively imitations of his beloved professor's sonorous and picturesque style of lecturing. To the end of his life, indeed, Sedgwick loved to cite Brewer's method of introducing Galton's law of heredity by eloquent insistence on the fact that 'every man has two

parents, four grandparents, eight great-grandparents, and so on to the end of the category.' "

Another distinguished Yale teacher whose influence was prominently felt was Professor R. H. Chittenden, now the head of the Sheffield Scientific School, but who was at that time an instructor in physiological chemistry. That Sedgwick must have proved an apt and satisfactory pupil is proved by the fact that in his senior year he was an assistant and later while a student at the Yale Medical School he was chosen by his instructor to carry on the course in this subject while Chittenden was on leave of absence to continue his studies abroad. Professor Chittenden speaks with admiration and respect of the keen intellect and high attainment of his pupil, and of the splendid way in which his work was conducted during his absence.

Graduating with high rank in his class, Sedgwick was chosen to read his thesis at the graduation exercises of the university in 1877.

The following autumn he entered the Yale Medical School, where he studied for two years, at the same time teaching physiological chemistry at the Sheffield Scientific School. His medical studies there were never completed, for as he became more and more deeply engrossed in experimental physiology and bio-chemistry, he felt dissatisfied with the unscientific manner in which the medical instruction of the period was conducted and felt the need of better knowledge of physiology. Moreover, his interests had gradually but strongly turned toward a career in science and investigation in the field of general biology and experimental physiology, and, while not entirely abandoning his idea of becoming a physician, he left his medical studies at New Haven, and in 1879 embarked with zeal upon further graduate study. Accompanied by his lifelong friend Wilson he entered the new university at Baltimore, Johns Hopkins, when it was only just beginning to appear as a luminary of the first magnitude in the scientific firmament. Here as Fellows a new life opened up to them — a life of hard work, real professional investigation and pleasant recreations, but as Professor Wilson expresses it, "it was not free from some of the material limitations of impecunious youth." Studying here with H. Newell Martin, the brilliant physiologist who had recently come from Huxley's laboratory at South Kensington and with W. K. Brooks in Zoölogy, and with lectures in minor subjects by Remsen, Rowland and other scientific leaders then at Johns Hopkins, the years spent there were a period of rapid intellectual awakening and widening of scientific horizon. With his natural aptitude for teaching and the magnitude of the opportunities as he saw them, at the end of his first year in Baltimore he abandoned the idea of medicine and decided to follow teaching as a life work. Associated with them during this period were Samuel F. Clarke, afterwards for many years professor at Williams College, and Kakichi Mitsukuri, who afterwards became the leading zoölogist of Japan and dean of the Scientific Faculty at Tokio. The four friends set up common quarters (locally known as the Biologists' Bower) and thus developed a friendship and intellectual companionship which remained warm and vital through the years of later life.

Receiving his Ph.D. degree in 1881, Sedgwick returned to Johns Hopkins as an instructor in General Biology, his marked gift of teaching having been quickly recognized by his professors. In the same year on his twenty-sixth birthday, December 29, 1881, his marriage to Miss Rice took place. This post of instructor he held for two years, when he was called to the chair of biology at the Institute of Technology. One detail of his appointment is of interest, his association with Gen. Francis A. Walker, then president of the Institute. As an undergraduate at New Haven, Sedgwick had been a student in Walker's class in political economy, and had greatly admired and respected the keen, handsome teacher, with his military bearing, his unbounded energy, and his logical and brilliant mind. Apparently there must have been some memory of outstanding qualities on the part of the student as well. At any rate, there was renewed in 1883 the association of Walker and Sedgwick—now as president and professor respectively—and between them existed a lifelong intimate friendship. Although practically without assistance, and teaching a number of subjects, on joining the Institute faculty Sedgwick's training and qualities were readily appreciated. He quickly espoused the cause of technical training and bent his energies toward applied biology, and almost at once began those studies pertaining to public health which have made his career so notable. The first important investigations were made in association with Prof. William Ripley Nichols on the relative poisonous effects of coal and water gas. But the new developments in the science of bacteriology opened an attractive field for study which was quickly taken up. The establishment of the germ theory of disease had been accomplished. The discovery of the organisms of cholera, typhoid fever, and tuberculosis had just been announced and the growing interest in sanitation of water supplies opened up a new line of applied biology to Sedgwick's keen mind. As a result there followed a series of brilliant papers bearing on biological water examination and the relation of water supply to public health. This led to his association with the State Board of Health as biologist and the epoch-making work of the late eighties and early nineties in conjunction with Dr. T. M. Drown and Mrs. Ellen H. Richards—pioneer investigations of the problems of water and sewage purification which gave to the State Board of Health of Massachusetts an international reputation. The work under his general supervision at the Lawrence Experiment Station, the investigations of the typhoid epidemics at Lowell, Lawrence and other cities and his writings on sanitary science brought Professor Sedgwick into the foremost rank among public health workers and the Institute of Technology as perhaps the leading institution of learning in this field. Although relatively few men entered the course in biology their achievements, with those of men from the allied courses in chemistry and sanitary engineering and general studies who also studied and worked with Professor Sedgwick, have brought renown to the school and have added some of the most brilliant pages to the history of sanitation in America. In those early days were worked out the methods of bacterio-

logical examination of air and of water, the Sedgwick-Rafter procedure of water examination for microscopical organisms, the data of water and sewage purification by slow sand filtration and the bacteriological analysis of milk, all processes which are now widely taught and still more widely used. But not only in the field of applied science was Professor Sedgwick's reputation a growing one. He wrote and spoke with distinction and authority on problems of general education. With Prof. E. B. Wilson as a colleague, the old laboratory in the Rogers Building was the birthplace in 1884-5 of the famous textbook of general biology which bears their joint names.

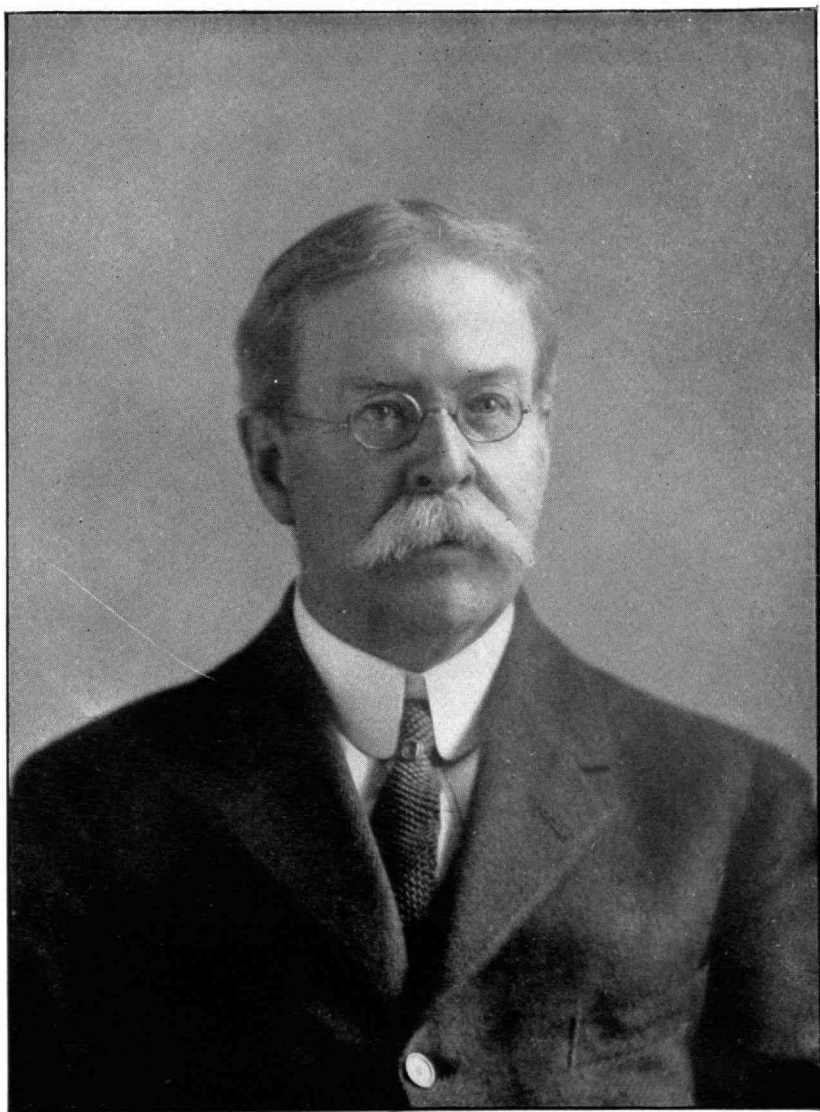
Professor Sedgwick's interests and influence broadened with the years. It would be impossible to detail all his professional accomplishments, or the manifold public services he rendered. A few, however, deserve special mention. He assisted Mrs. William Barton Rogers in the preparation of those remarkable volumes: "The Life and Letters of William Barton Rogers." In 1902 he published his celebrated book, "Principles of Sanitary Science and Public Health," which for literary merit as well as scientific soundness is sure to hold its place as one of the great classics of biological literature. A few years later in collaboration with Professor Hough came "The Human Mechanism," a textbook of physiology and personal hygiene. Nor should one overlook the work of the Sanitary Research Laboratory and Sewage Experiment Station conducted under his general direction for many years through the generosity of a donor long unknown (the late Mrs. William H. Hughes) who had appreciated his great service to sanitary science and felt this to be a most effective way of aiding in the cause of public health. Through her munificence in supporting this work, ten volumes of valuable reports have been published, and requests for them from all over the world attest the value of this service and the reputation which the scientific work carried out had attained.

While the achievements of Professor Sedgwick in his chosen field of sanitary science and public health naturally demand the greater share of attention in any record of his life and work, the breadth of his interests is shown by some recognition of his works in the field of general culture. Believing that the historical approach to a subject is often the most logical and the one most likely to lead to appreciation of the broad principles of any science, he felt the great cultural value of the history of all the sciences, and early in his career instituted a course of lectures on the history of the inductive sciences to the students in the departments of physics and biology. It is of much significance that this course, the first of its character to be given in America, should have been developed in the severe curriculum of an engineering school, and speaks with no uncertainty of the belief of the Faculty in broad training and culture. These lectures (at first more like informal talks) were so illuminating in their character, so fascinating in their presentation and so tinged with the appreciation of art and poetry as well as of science that the students of those early years eagerly looked forward to them, and doubtless would gladly have "cut" the more laborious

"professional" subjects in order that they might get this refreshing draught from a realm remote from the more exacting domain of modern science they were pursuing in laboratory or departmental room. With the lecture growth of the Institute and the increase of the cultural or general studies this course was greatly expanded. Professor Tyler collaborated with Professor Sedgwick by giving the history of the mathematical sciences. This co-operative work came to rich fruition in the admirable "Short History of Science" by Sedgwick and Tyler which appeared in 1917.

For fifteen years after coming to the Institute Professor Sedgwick's department was cramped into the one large room at the rear of the first floor in the Rogers Building. Here in the early days, as he often said, he was professor, assistant and janitor. There were dark days, but he never complained or faltered, and faith in a great cause triumphed. In 1898 the department moved into more adequate quarters in the Pierce Building where it was possible to develop normally, and there took place the broadening in scope of the work which has added to his fame. Here the Sanitary Research Laboratory was started, and research in various bacteriological lines began to grow up under his encouraging leadership. Through his untiring devotion broader public health relations were established, reaching their highest development in 1913 in the formation of the Harvard-Technology School of Public Health of which he was not only chairman but the magnet which drew men to it. This association of the department of biology and public health with certain departments of the Harvard Medical School and Harvard College at once attracted men of ability, enthusiastic and eager to be enrolled in the public health army. How skilfully he, with his able colleagues from the other schools, surmounted almost insuperable obstacles and placed this school in the leading position of schools of its kind is attested by the service records of its students, not merely in the United States but all over the world. No more cosmopolitan or interesting group could be found than these classes of earnest men and women, representing Canada, Mexico, China, Siam, Brazil, Colombia, Italy, Czecho-Slovakia, India and other countries, as well as America, which yearly gathered to study in the school which Professor Sedgwick's reputation had done so much to create. It is typical of his modesty and unselfishness that his last act as a member of the Administrative Board of this school was to aid in the preparation of a plan for a more stable organization of the school in order to guarantee its future permanence and continued service to the cause of public health education, but by which his own position as its nominal head would be sacrificed. Whatever the future development of the school may be, he will always be looked upon as its real founder and first great leader.

Although primarily a great teacher, Professor Sedgwick was an investigator of high order and an ardent believer in research. He urged his students and assistants to undertake investigations and to publish, not merely as a means of becoming known, but in order to increase their own knowledge and to test and develop their own power of original



WILLIAM THOMPSON SEDGWICK
Head of the Department of Biology and Public Health
DIED JANUARY 25, 1921

work and organization. During his later years, with the multiplicity of demands on his time and strength he did but little laboratory investigation, and then generally in association with an assistant or graduate student. How many pieces of original work nominally produced by others had their real inception in his fertile brain, it would be difficult to say, but the number is not small. He was generosity personified in such matters, however, never claiming the credit which was due him, but bestowing it largely on the helper who had borne the burden of the actual labor involved, no matter how trivial might have been his mental contribution. This fairness and spirit of paternal generosity had the effect not only of encouraging the young investigator to renewed efforts, but it promoted that devotion and loyalty to a great-hearted chief which has ever been characteristic of Sedgwick's pupils. It should not be inferred, however, that Professor Sedgwick's scientific "output" was small. Compilation of available data shows an even hundred titles of books, reports, papers and addresses from his pen. Many of these are of interpretative character, setting forth with lucidity and vigor the significance of phenomena observed in biological or public health studies. His keen analyses of facts combined with a remarkable sense of values in sanitary matters caused his opinion to be most highly regarded and his reputation as an interpreter of the data of public health is second only to that as a teacher. Nor was his power of interpretation confined to matters of public health, for it was frequently exhibited in the field of general and technical education and in the still broader field of civic and national life. One of the most striking addresses of this character in the field of education was that delivered at the one hundredth anniversary of the Medical School of the University of Cincinnati in December, 1920, when he advanced an original and comprehensive plan for the training of health executives by medical schools.

In no way were the broad sympathies and deep interest of Professor Sedgwick in everything that pertained to human welfare better exhibited than in his association with professional and charitable organizations.

He was a valued member and past president of the New England Water Works Association, a fellow of the American Academy of Arts and Sciences, fellow of the American Association for the Advancement of Science, a charter member and the first president of the Society of American Bacteriologists, president and trustee of the Sharon Sanatorium, a trustee of the Faulkner Hospital from its foundation, a trustee of Simmons College from its inception and for many years on its executive committee, chairman of the Volunteer Board of Overseers of the Pauper Institutions of Boston for several years, a past president of the Civil Service Association and of the National Security League, a counselor and assistant surgeon general (reserve) of the United States Public Health Service, a past president of the American Public Health Association, fellow of the Royal Sanitary Institute of Great Britain, a member of the Council of the State Department of Health, and a member of the International Health Board. These were no mere memberships in

name only, but represented work, thought and deep study of problems that affect personal, civic and national health, welfare and security. One marvels at the range of his interests, and even more at the devotion and success with which his service to each of these and various lesser organizations was signalized. Even this was not all, for as curator of the Lowell Institute for twenty-four years he gave scrupulous attention not only to the problems of suggesting or securing lecturers and ministering to their professional and social requirements, but also to the minor problems which affected the convenience and comfort of the audiences large or small which gathered to hear the distinguished speakers. In this way Professor Sedgwick became known to and beloved by thousands of people who otherwise might never have known him at all. Aside from his teaching at the Institute he had been a lecturer at Simmons College and other institutions. In the summer of 1917 he was a visiting professor at the University of California and gave two courses of lectures on public health which did much to promote the rapidly growing interest in this subject on the Pacific Coast. In 1920, he was the first exchange professor from the Institute to the Universities of Cambridge and Leeds in England and represented the United States at the great meeting of the health officials at Brussels.

The appointment of Professor Sedgwick as exchange professor to the Universities of Cambridge and Leeds was of more than ordinary interest and significance. With Mrs. Sedgwick he left Boston in April, 1920, and his lectures were given during the spring and the Long Vacation. This service marks in a way the pinnacle of his extraordinary career as a teacher and came to him as a rich reward for a life of devotion to high ideals in the teaching profession. It was a privilege which he highly appreciated to represent Technology in England for the first time, and to have the opportunity of setting forth the achievements of an engineering school in public health training.

When it is borne in mind that, in Europe, training in these subjects has been almost exclusively the function of medical schools and that there was little sympathy with the view that a non-medical man could be a first-class public health official, the delicacy of Professor Sedgwick's mission is recognized. In his lectures at Cambridge and Leeds, however, he so skilfully explained the organization and aims of the Institute and the relation of technical training in America to public welfare, as well as to industry, and also showed himself so deeply learned and so practical in the complex problems of public health administration, epidemiology and the control of infectious diseases, that his success was instantaneous. Added to this, his breadth of vision, charm of personality, respect and sympathy for the English institutions, and his grace and dignity as a speaker, won for him high praise and admiration. How deep an impression he made and how enthusiastically his service was received is shown by the eloquent words of Sir Michael Sadler of Leeds University. "There was such vitality in his thought and in his influence that he is still a living presence amongst us. He was a link between two nations. In a very real sense he served as a representative

of the United States in England, and in him we knew that we had a far-sighted and eloquent spokesman of American thought. . . . He had the simplicity of greatness. He taught us to feel the essential oneness of humanity, be it American or British, the unity of science, and the common aims of education and of disciplined life."

At the International Health Conference held in Brussels in the summer of 1920, Professor Sedgwick represented not merely the Institute but also Harvard University, the American Public Health Association, and the United States Public Health Service. He was therefore actually a national representative, an Ambassador of Health, as one of the Boston papers happily characterized him at the time of his departure for Europe. Professor Whipple has briefly described the part he played at this conference in a few sentences which must stir the pride of every Technology man.

"Representatives of various nations, gorgeously arrayed in uniform and regalia, had been droning out weary speeches, the audience being visibly bored, when Sedgwick's turn came. . . . Simply dressed in his academic robes, he arose and spoke for ten minutes. He praised brave little Belgium and faithful France for saving the world, he gave to England the credit of being the father of public health administration, and then spoke for America. I do not know what he said — I was not there — but I have been told that the audience went wild in applause and that scores of people, including our own ambassador, went forward after the meeting to shake his hand. It was the climax of the convention."

The foregoing record tells something of what Professor Sedgwick did, but it does not wholly portray the man, his character, or the qualities of heart and mind which most impressed themselves on his students and colleagues. Those traits which so endeared him to his intimates in undergraduate days — his humor, his sympathy, his fairness and considerateness and his readiness to be of help and lighten the burden of some one less gifted or less fortunate than he — endured and expanded throughout his life. These, together with a remarkable gift of imparting knowledge, and a wise, sane philosophy of the conduct of life, made him the ideal teacher. Indeed, his philosophy of life was possible because of these inherent qualities. He must have had the same attitude toward the student that Mark Hopkins or Dr. Jowett, the great master of Balliol, possessed, and he inspired much the same admiration, amounting almost to hero-worship, which has been ascribed to those great teachers. His skill in teaching general biology or any general subject was marvelous, and he could so vitalize and illumine the matter in hand, could direct the student's thought to it from so many different angles, that it was indeed a dull mind that did not respond. While a lecturer with few peers, his favorite method of instruction was the laboratory quiz, for here he made the student observe his own facts, think out his hypotheses, develop his theories and verify his conclusions by repeated observation. In fact his whole teaching method was based largely on the belief that education must come from within,

that the student's mind was not a mere receptacle into which facts or information could be poured heterogeneously, but that there should be a well-ordered insistence on fundamental principles, and a training of the machinery to classify, weigh, observe and arrange facts so that straight thinking could not fail to bring sound conclusions. How skillfully he taught students to use their own reasoning powers, rather than to depend on mere memory, many a man can bear witness.

One of the most characteristic and useful of the agencies of instruction which he employed in the department was the weekly Colloquium, or Journal Club, wherein the advanced students and instructing staff met on common ground, and reported on the significant current literature or events of professional interest. By this means the student was taught how to present a subject briefly and in a telling manner, and how to think while on his feet. A master of English himself, as well as of the art of public speaking, Professor Sedgwick made this training of inestimable value to the student. The kindly criticism, reinforced by example, was remarkable in its results. Confidence, simplicity and correctness of speech, clear thinking, and right use of voice and carriage were thus brought home to the student, and were recognized by him as a proper part of the real equipment of an educated professional man. How painstakingly and considerately Professor Sedgwick worked with a self-conscious and shy student, few outside his department will ever know, but it was a worthy and valuable portion of the instruction, and his students recall it with deepest gratitude.

Another agency worthy of mention which he used constantly was the bulletin board, whereon were posted clippings relating to matters of professional, civic or political importance in the world at large. This was a form of service appreciated not merely by the students in the department but by the hundreds who passed through the corridors and often stopped to read the notices or see the pictures which opened up vistas of a world outside the confines of the Institute walls, and inspired an interest in the great public problems of citizenship and national welfare. By this means the far-visioned professor rendered distinctly constructive service in calling attention to the dangers of radicalism and false doctrine, and in emphasizing the high character, patriotism and good citizenship which he believed to be fundamental qualities of a successful professional man.

But there was something more than this which made Professor Sedgwick's influence with his students so potent. The sympathy, the perfect understanding of the student's point of view, the ability to discern the doubts or the aspirations and to guide and direct — these qualities together with that indescribable rare personality, commanded instant loyalty, awakened latent possibilities, and established a relation between teacher and student which developed with the years. The result of this *rapport* between Professor Sedgwick and his pupils can be expressed in no better way than by quoting from a few of the many letters which have been received since his death. These heartfelt statements reveal what a teacher he was, and how that friendly influence,

so quietly exerted, has been the controlling force in the lives of many men who have gone out to carry on the work of public health and public service. Thus Professor Sedgwick still lives and works, and will continue to work, through these loyal sons of Technology to whom he was more than a father.

One writes: "He encouraged me, inspired me and strengthened me to fight life's battle. He taught me to know good work and to despise poor work, to struggle for the truth and to demolish superficiality and cant . . . He gave me a point of view which has carried me through everything I have attempted and which I expect will carry me on to the very end . . . His spirit is still going on."

Another: "The world for his many students will be changed forever at the going of their great and good friend and teacher."

Another: "I shall always think of him as the inspiring teacher but more than all as the considerate helpful friend, always interested in others and always living the largest and most useful life possible."

Yet another, a foreign student from far-off Czecho-Slovakia: "Our great teacher, father and adviser has left us. . . . He did not die but will live as long as we shall work who count ourselves among his pupils."

Still one more, who by his own great service to humanity has become known and loved in Europe as well as in America, writes: "He taught us not merely a profession but gave us at the same time a religion. Our work is the active evidence that this religion lives. He is gone but his spirit lives, he has created a spark in the hearts of many men who carry on; his influence is felt in many parts of the world. He started his work when America was blind to its needs in public health. His foresight, scientific knowledge, wisdom and great loving personality made him what he was, a leader of men, an inspirer of youth, a magnificent teacher, a genuine friend and a great citizen."

What tributes to a great teacher could be finer than these brief statements? What higher praise could any man have than is shown in these appreciations of his nobility of character and inspiring leadership?

Professor Sedgwick's long and devoted services as a good citizen have already been indicated. It would be unfortunate, however, should we overlook in a sketch of this sort the intensely patriotic service rendered during the recent war. With a department depleted of a considerable portion of its staff, Professor Sedgwick organized and successfully carried out war courses for the training of laboratory technicians, especially young women, to meet the demands created by the national emergency. The value of these courses to the Government was immeasurable, and this service cannot be too highly praised, especially when it is known at what personal sacrifice of time and comfort and at what danger to his own health, already impaired by an incurable structural defect, it was performed. Yet with full knowledge that the extra exertion might at any time prove fatal, he "carried on" like a true soldier. The fervor of his loyalty to the allied cause and to the sense of righteousness and justice is shown in that wonderfully stirring address to the

New England Water Works Association, "From Peace to War, From War to Victory, From Victory to Just Judgment."

Although Professor Sedgwick's name will be handed down to future generations as an inspiring teacher and an example of unselfish constructive leadership, many of his contemporaries will remember him with most affection as a great-hearted, loyal and helpful friend. No man was less self-seeking than he, none more appreciative of others, none more generous in his acts or in his impulses. No one merited more than he the love and trust which as by a natural birthright came to him on every hand. Class, creed or fortune mattered not. He had understanding and sympathy and instantly recognized character, purpose and manliness. In success or adversity men turned to him intuitively, assured of finding new inspiration and buoyancy in his serene optimism and friendly sympathy, or new decision and encouragement by aid of his calm practical judgment and clear vision. One cherished and distinguished friend wrote of him, "Wisdom seemed to preside over his utterances." This his close associates distinctly felt, and sought his advice, not merely in matters of professional importance, but in the more intimate and personal affairs of life. Another wrote, "I have known few men in whom gentleness and force, considerateness and candor, science and faith, were so completely at one. He had a gift for friendship and his friends turned to him as to the sun." His kindness seemed illimitable; he radiated helpfulness. Like Abou Ben Adhem, he "loved his fellow-men." The desire to be of service, whether personal or public, dominated and enriched his whole life, for he was activated by an innate goodness and purity of spirit which transcended doctrine or creed. Few men have left such a heritage of good works, love and inspiration. Writing of him Mr. Andrews said:

"There was something cumulative in the good he wrought, so that the sense of his worth came unawares upon one like the approach of morning. Beyond the immediate friendliness of the man lay a constancy and fulness of goodwill that was impersonal and really great, measurable only as it is withdrawn."

It is difficult for one who has for many years worked by Professor Sedgwick's side, felt the inspiration of his comradeship and been trained to the ideals which he seemed always able to implant in the souls of men, to find fitting terms in which to characterize the great leader. Affection and loyalty, obligation and grateful acknowledgment, admiration and honor, all strive for expression. To all "Sedgwick's men," and to those not of his own students but who are proud to align themselves as his disciples in the cause of public health he will be held in perpetual reverence as the ideal teacher, the ideal man. The sense of loss will continue to be felt, the knowledge that something very fine, high and precious has gone from our lives will persist, but the memory of that undaunted spirit will ever continue as a living presence, to give inspiration, incentive and help to carry out the work he so greatly planned. To look back over the years of happy association and experiences, to recall the constant service admirably rendered, the power wisely used,

the honors richly deserved and nobly won, will ever keep warm and vital the influence of this great leader. The prevailing force of his mind and his loving spirit will not only abide but must go on in the hearts of men as surely as time is eternal and space endless. We can close with no more fitting words than those written of him by Dr. Peabody:

"... To do the work of a busy life, to win the honor and love of a multitude of friends and pupils and to die in the fulness of power — what could any one ask more?"

REGISTRATION FACTS AND FANCIES

Culled from the president's report

ABOUT 10 per cent of Tech students receive financial aid in scholarships, says the president's report, which adds that the scholarship committee last year recommended awards of \$31,729.50 among 358 students.

The age of students entering Tech is on the increase, the registrar reports in his section. The average age of the entering student increased from 18 years and 11 months the year before to 19 years and 3 months last year. For a time before the war the average entrance age had been steadily dropping. Tech does not look with favor on the infant prodigies accepted in some colleges, as there is a strict rule barring from Tech all those who have not reached the age of 17.

That Tech is becoming more and more a national institution is shown by the figures which prove that proportional increase in registration is greater from the Western States than from Massachusetts, and that now more than 2000 at Tech out of its 3500 come from outside Massachusetts. Tech enrolls representatives of 32 foreign countries, or 7 per cent of the total registration. China leads with 40. Canada and Norway are tied at 38 each.

The registration in 1920 was a gain of 69 per cent over the previous year and 57 per cent over the largest year in the history of the Institute formerly, the registrar reports. This abnormal increase made the congestion in the laboratories so great that the entire scheme had to be reorganized, courses repeated and accommodations worked to the limit.

The congestion will be much relieved by the opening of the Pratt Memorial School of Naval Architecture. The problem of the increase of salaries was met by a bonus until a careful study and readjustment of the salary scale was made.

PROFESSOR SEDGWICK DIES SUDDENLY

Senior professor at the Institute — a long and important scientific career — very greatly beloved

PROFESSOR WILLIAM THOMPSON SEDGWICK, professor of biology and public health at the Massachusetts Institute of Technology, and one of the leading educators of the country, died suddenly late on Tuesday night, January 25, at his home 282 Berkeley Street, Back Bay. Professor Sedgwick had attended a conference at the Women's City Club, earlier in the evening, relative to the formation of a State university. Following the dinner and conference there, he walked to his home, arriving there about 11.30 o'clock. When he reached the door of his home he suddenly collapsed and fell. Dr. Edwin A. Locke, a near-by physician, was immediately called in and pronounced the professor dead. Death was due to natural causes. Professor Sedgwick had suffered for years from an incurable heart trouble.

In his career as an educator, Professor Sedgwick had become widely known. His connection with the Institute had continued since the early eighties and in addition to these connections he had been identified prominently with various important interests. Since the time when he was made curator of the Lowell Institute in the early part of 1897, Professor Sedgwick has had charge of all arrangements for the notable Lowell lectures. He directed the various courses and, unless away from Boston in the interest of educational work, he always made a point of being present at every lecture.

It was his custom to stand near the head of the stairs where he could greet those who attended these lectures, and in this way Professor Sedgwick had become known to probably thousands of people who never had attended Tech as students and in perhaps no other way would have met this distinguished member of its faculty. His personal oversight of the numerous details in connection with different Lowell Institute courses was of the greatest value in the success of these lectures, from the viewpoint of the public attending them and also that of the speakers.

William Thompson Sedgwick was born in West Hartford, Conn., December 29, 1855, the son of William and Anne Thompson (Barbour) Sedgwick. He was a country boy who developed naturally those qualities which made evident his claims to the higher education, so that instead of finishing, as was his intention, at the Hartford High School, he was persuaded to prepare himself for the Sheffield Scientific School at Yale, which he entered in the class of 1877. He was a brilliant student, but not a "grind", for he found time to have intimate and sympathetic relations with almost every member of the class.

He took the degree of bachelor of philosophy in the biological course, intending to become a physician and to this end studied at the Yale Medical School, which he entered in the autumn of 1877, helping himself meanwhile, by tutoring. One of the professors was obliged to go to Europe and young Sedgwick, without giving up his regular medical studies, undertook to teach the rather tough subject of physiological chemistry in his place and acquitted himself successfully. In 1879 he was offered a fellowship in biology from Johns Hopkins, and Professor Martin thenceforward counselled him to abandon medicine for biological science, which seemed to be his work beyond question. He became assistant in biology at Johns Hopkins in 1880, and was honored with the degree of Doctor of Philosophy in 1881. Johns Hopkins made him associate in biology in 1882.

President Walker was then at the Institute of Technology and as Sedgwick had been in one of his classes at Yale, the men knew each other. President Walker wanted Sedgwick in Boston and the latter came in 1883 to become assistant professor of biology. Every year, to the year of President Walker's death, Mr. Sedgwick grew nearer and nearer to him, and though the younger man brought to the Institute ripe scholarship and a thorough teaching equipment, he acquired, year by year, more of the president's spirit, executive ability, breadth and versatility. He became assistant professor in 1884 and professor in 1891.

Professor Sedgwick distinguished himself in connection with the State Board of Health as an investigator in bacteriology concerning gas, water, sewage, milk and the germs of epidemics. He was appointed its biologist in 1888, and his publications in the scientific periodicals and his reports are of classical repute all over the world. While he was thus engaged the great epidemics of typhoid fever at Lowell and Lawrence broke out, and he investigated them for the State Board and the Water Board of Lowell, with so much success that he was employed for the next two or three years largely upon the epidemiological work of the board and thus became one of the leading epidemiologists of the country.

He was director of the sanitary research laboratory and sewerage experiment station of Technology as well as chairman of the administrative board of the School for Health Officers organized by Harvard University and Technology. Many of the leaders in public health and sanitation in the United States have been trained by Professor Sedgwick.

Among the prominent positions he held are included the office of chairman of the Pauper Institutions' Trustees, from 1897-99. He had been a trustee of Simmons College and president of the board of directors of the Sharon Sanatorium. In 1902 he became a member of the advisory board of the Hygienic Laboratory of the United States Public Health Service. From 1898 to 1900 he was vice-president Boston Society Municipal Officers. He was president of the Boston Civil Service Reform Association in 1900, and of the Massachusetts Civil Service Reform Association in 1901. He served also as president of the American Society of

Naturalists and of the New England Water Works Association and the American Public Health Association. He was a past president of the Society of American Bacteriologists.

Professor Sedgwick was a fellow of the American Academy of Arts and Sciences and of the American Association for the Advancement of Science, of which he was one of the vice-presidents in the section of experimental medicine in 1905. He was also a trustee of the Faulkner Hospital and a director of the National Association for the Study and Prevention of Tuberculosis and a member of the American Philosophical Society of Philadelphia.

He was the author of works and papers on biology and of a standard treatise entitled "Principles of Sanitary Science and Public Health," which had much to do with the shaping of public health education throughout the United States. Another of his books is entitled "The Human Mechanism," a treatise on physiology and hygiene used in schools and colleges. He was a member of the St. Botolph and Technology Clubs. On his birthday anniversary, December 29, 1881, he married Mary Katherine Rice of New Haven, Conn. His wife survives him.

Professor Sedgwick was Technology's first exchange professor and had only recently returned from England, where he represented Technology at the Universities of Leeds and Oxford in exchange for an English professor who will shortly come to the Institute. While abroad he attended the conference of the Royal Institute of Public Health at Brussels as the representative of Technology, Harvard, the Massachusetts State Department of Health, the American Public Health Association and the Rockefeller Foundation.

MANY DISTINGUISHED MOURNERS AT THE FUNERAL

Funeral services were held in the First Unitarian Church, Brookline, Friday noon, January 28. The Rev. Abbott Peterson, assisted by the Rev. Theodore Bacon and the Rev. Samuel Eliot, officiated. Over six hundred assembled to pay their esteem to the name of the man who was recognized as a great leader in the world of biology and public health. The Institute Glee Club sang two songs from the Unitarian Hymnal.

The service which was simple and impressive lasted a little over half an hour. The body was cremated at Forest Hills.

The number of people who filled the little church to capacity and the number of different interests which sent representatives to pay tribute to their late co-worker or leader, indicated the high esteem in which Professor Sedgwick was held by his associates in all walks of life. A delegation from the State Board of Health, from Wellesley College, from the Massachusetts Institute of Technology Employees' Association, the faculty nearly in entirety, a great number of alumni and many students were among those who had come to honor the name of the late Institute professor. Prof. E. B. Wilson, of Columbia College, Prof. Samuel F. Clark of Williams College and Prof. Theodore Hough, Dean of the Medical School, University of Virginia, were co-workers and

admirers of Professor Sedgwick who came from a distance to pay tribute to his memory.

Prof. H. G. Pearson of the Department of English and History at the Institute was in general charge of the arrangements and the services at the church.

Honorary pallbearers were chosen to represent the various organizations with which Professor Sedgwick was affiliated, as follows: President C. W. Eliot, of Harvard; Elihu Thomson, acting president of the Institute; Dr. Francis H. Williams, the Corporation; Prof. Henry P. Talbot, the Administrative Committee; Prof. Henry Lefavour, the American Academy of Arts and Sciences and Simmons College; Prof. George C. Whipple, the International Health Board; Prof. M. J. Rosenau, the Massachusetts State Department of Health and the Harvard-Technology School of Public Health; Col. E. K. Sprague, the United States Public Health Service; Judge Frederick Lawton, St. Botolph Club; Dr. V. Y. Bowditch, the Sharon Sanitarium; Prof. C. F. Park, Lowell Institute; Prof. S. C. Prescott, the Institute Department of Biology and Public Health.

The pallbearers were all students in Course VII: F. O. Holmes, '21, R. V. Tewksbury, '21, A. A. Ellsworth, '21, K. Perrine, '22, A. H. Stevens, '22, W. R. Hewes, '22, Major Bayliss and Mr. Burger of the School of Public Health.

The ushers at the church were members of the Institute faculty; Professors R. P. Bigelow, C. E. Turner, Davis R. Dewey, Dwight Porter, C. H. Warren, J. F. Norris, H. W. Tyler, and Mr. Leonard Metcalf, representing the Alumni Association.

At a meeting of the Massachusetts Institute of Technology Employees' Mutual Benefit Association the following action was taken on the death of Prof. W. T. Sedgwick:

It is with the deepest sympathy that we, the employees of the Massachusetts Institute of Technology, assemble and adopt the following resolutions:

Whereas, the hand of Divine Providence has removed from our midst Prof. W. T. Sedgwick, an honorary member of our association, and one of its best friends, and in view of the loss we have sustained by the decease of our honored friend, and the great loss sustained by the Massachusetts Institute of Technology,

Resolved, That we, the employees of the Massachusetts Institute of Technology, do hereby express our great sorrow, and tender our heartfelt sympathy to Mrs. Sedgwick.

Resolved, That a copy be sent to Mrs. Sedgwick, and that these resolutions be spread upon the records of this association.

Signed: Harold R. Blackler, *President*,
John E. Handy, *Secretary*,
Committee for the Association.

PROFESSOR SEDGWICK FRIEND OF YOUNG MEN

Scientist, educator, administrator, and counselor — also remembered for relations of confidence he maintained with students — an appreciation by one of his associates.

(Written for "The Tech" by George C. Whipple, '89, secretary of the Administrative Board of the School of Public Health of Harvard University and the Massachusetts Institute of Technology and professor of Sanitary Engineering at Harvard.)

"SEDGWICK started me off!" "Sedgwick was responsible for my career!" "There are two men in the world whom I always obey — one of them is Professor Sedgwick, because his advice is always sound——" "We have just named our baby for Sedgwick."

These casual remarks of former students made to me within a few weeks are illustrative of the inspiration of his teaching and of the precious relations of confidence and affection which have always existed between Professor Sedgwick and the young men who studied with him. In his early days he was a scientist, keen for research; in his middle life he was an educator in science and an administrator in public health, and in his later life he was scientist, educator, administrator, and counselor — but always, first and foremost, he was the friend of young men.

I count myself fortunate to have been one of these young men — one who knew him in the early days when the science of bacteriology was in its infancy and when a splendid vision of the applications of biology to problems of sanitary engineering and public health was dawning in his soul. I was fortunate in being present at a dinner attended by about seventy-five of Professor Sedgwick's former students in 1906, at which time a volume of scientific papers written by them in commemoration of the twenty-fifth anniversary of his doctorate was presented to him. Now, fifteen years later, his students are far more numerous and through them his influence has been felt not only throughout America but the world over.

I count myself fortunate also to have been associated with Professor Sedgwick in recent years in the Public Health Council of the State Department of Public Health and the Administrative Board of the School of Public Health of Harvard University and the Massachusetts Institute of Technology. His mature judgment on fundamental problems of education and public health was always a source of strength to his colleagues and the enthusiasm of his early years never failed him.

I count myself fortunate to have been present at the dinner given in the Walker Memorial recently in honor of one of his favorite pupils, Professor C. E. A. Winslow of Yale, on the eve of his departure for

Europe. At this dinner Professor Sedgwick presided with even more than his usual grace and the pleasant hours were spent looking both backward and forward — he looking forward to Winslow's new work at Geneva with the League of Red Cross Societies, and Winslow looking back to the days spent with his chief in the Institute laboratories. It was a small gathering of old friends and of students who have come from the many nations now represented in our School of Public Health. This gathering, small though it was, was typical of his expanding life.

Professor Sedgwick's interests in public health matters were very wide. He not only served the State of Massachusetts as biologist of the former State Board of Health and as Public Health Councilor of the present State Department, but was for many years on the Advisory Board of the United States Public Health Service. A few years ago he was commissioned as assistant surgeon general in the United States Public Health Service Reserve. He was also a member of the International Health Board of the Rockefeller Foundation. He served as president of the New England Water Works Association, Society of American Bacteriologists, American Association of Naturalists, and the American Public Health Association. He was a Fellow of the American Academy of Arts and Sciences and a member of many other scientific societies.

His scientific writings were numerous, including such well-known books as "General Biology," "Principles of Sanitary Science and Public Health," "The Human Mechanism," and "A Short History of Science." One of his last addresses, not yet published, was given at Cincinnati at the occasion of the one hundredth anniversary of the founding of the Medical School. In this address he set forth new ideas in regard to the training of men for the public health service, another instance of his habit of looking ahead. At this occasion he was honored with the degree of LL.D.

Professor Sedgwick's interests overflowed the bounds of sanitary science and many of the people of Boston know him best as curator of the Lowell Institute, as trustee of Simmons College, as president of the Sharon Sanatorium, or the Civil Service Reform Association. His was a wide field of public service. He lectured often and on the very evening of his death discussed the problem of a proposed Massachusetts State University before the Women's City Club.

But amid all of his many activities he had two supreme objects of devotion — one the science of biology, which he loved beyond all other sciences, and the other the Institute of Technology, which he also loved and which always received prior claim to his time and thought. He was fundamentally a great teacher. Those of us who knew of his weak heart — he often said jokingly that it was better than an insurance policy — marvelled at his activities during the war when he took on extra work that the American cause might not suffer.

In these first hours when his loss is so keenly felt one cannot write an adequate appreciation of his life's work, but we may at least say that in the history of American public health, no name will be more deserving of honor than that of William Thompson Sedgwick. Every student of

Technology should study his life, for no finer example of broad scholarship, or public service, or of Christian character ever occupied a chair in the faculty. No professor was more beloved.

FEW SONS OF FARMERS AT M. I. T.

Wage-earning class bulks large

OLD Cyrus and Ephraim have never forgotten the scientific lad that sold them the lightnin' rod back in '98 and won't have their boys have any doin's with science and sech-like truck. At least so it would seem from figures compiled by Registrar Walter Humphreys which shows that out of 1400 representative Tech students chosen at random, only 30, or 2 per cent, are the sons of farmers.

On the other hand, the old adage, "Anybody's job is better than mine," is illustrated by the fact that out of 1466 cases considered, 583 of the Tech students were sent to study engineering by fathers who follow business for a living, and only 197 were the sons of professional men, which includes not only engineers, but also a large percentage of doctors, lawyers and other professional men.

Outside of business men, the class which sent most of the men to Tech is the wage-earning class. The figures are: Sons of business men, 583, or 39.8 per cent; of wage earners, 258, or 17.6 per cent; men whose fathers are retired or dead, 219, or 15.6 per cent; sons of professional men, 197, or 13.4 per cent; not given, 136, or 9.2 per cent; sons of Government officials, 43, or 2.9 per cent; of farmers, 30, or 2 per cent; total 1466.

Figures which were also compiled by the Tech registrar show that the average age of the Tech alumnus is 38 years, which is 10 years older than a similar average age compiled 10 years ago. The average age of graduation has stood for years within a month of 23 years.

Of the 2718 members of the 10 Tech graduating classes before 1917, 921, or one-third, had attended other colleges, and 4229 or 18 per cent held degrees from other colleges. During the last 5 years the figures are 34 per cent and 17 per cent.

TRIBUTES TO PROFESSOR SEDGWICK'S MEMORY

A voice from his women students — the *Transcript* editorial —
the Bacteriological Club — the Sharon Sanitarium

“Patient of Toil: Serene Amid Alarms”—*W. T. Sedgwick.*

To the Editor of the Transcript:

In the chorus of grief over the untimely death of Professor Sedgwick, there is one voice that should not fail to be heard, that of the women whom he befriended in so many ways, both at the Institute of Technology and in their later work for science or for public service.

The time comes rapidly when there shall be no “woman question” nor any unnatural classification by sex of things not concerned with sex. So far as the product is concerned, we shall cease to talk about women-writers, women-architects, women-students. But until that desired consummation, those who have cared for and worked for woman cannot help classing public men into feminist and anti-feminist; and it is because Professor Sedgwick called himself anti-feminist — because he belonged to anti-suffrage societies, and might make addresses on woman’s sphere — that it so specially behooves feminists to offer grateful acknowledgment of the tireless kindness with which he befriended women, the justice touched with chivalry that he showed toward them, and the volume of the work by women which is due directly or indirectly to his help.

Chivalry is a word loosely used; sometimes it means forbearance of the strong toward the weak, and sometimes it means ungrudging acknowledgment of the nobility of one’s opponent; and in this last sense a woman may well show it to a man. It has always seemed to me that the English militants missed their supreme opportunity for chivalrous salutation of the enemy when the Titanic went down, and men died for one idea of woman’s due as cheerfully as women were going to prison for another. Merely intellectual discords must die out and leave the moral harmony. And so when a man of Professor Sedgwick’s eminence as a biologist tells women that their “movements” today are all headed in the wrong direction — when in voicing the creed to which we all subscribe, that woman must not push herself against her nature into an unnatural competition with man, he states it as his conviction that many of us are doing just that — why it makes one even more anxious not to add ingratitude to dissent. Never was there a stauncher friend to women in need of help, nor a kinder and more sympathizing listener to those who wanted advice, nor one less insistent on having his advice taken if some little chit of an inexperienced girl was after all the person with a right to decide; nor have I met anybody fairer in his treatment of women than this man who called himself an opponent of the woman-

movement. To those who knew him well enough to love him, there was something rather tenderly amusing in watching how his disapprobation of a woman's part never interfered with his perception that some particular Mary Jones or Jane Smith was not getting a fair deal, and that it was worth his taking endless trouble to give her one. His habitual justice (tempered, perhaps, with a little extra gentleness and kindness) to the women working with him or coming to him for help, might tempt those who most disagreed with him to say, "Almost thou persuadest me to be an Anti."

But after all there is something little-minded in regarding a life so broad and interests so catholic from one point of view, even though it be only for a moment that we look at that single facet. One of the hundreds of women who received kindnesses from him now asks to lay her small leaf of tribute among the wreaths on his coffin. If I were to choose one thing by which to characterize him, one thing which his students should try to learn from him, I should name his serenity. Few workers so exemplify the unhesitating and unrelenting labor that we aim at. Dr. Sedgwick could never be what his boys would call "rattled;" some one once said to me of him, "That man has no nerves." This means that he kept that sense of proportion so easily lost when men are trying to push things through. From the fanatic down to the ordinary citizen-of-Boston, there are few who escape a measure of hysteria in trying to rouse the indifferent to reform. But this unvarying serenity while hard at work was Professor Sedgwick's most salient characteristic, and his unfailing kindness and courtesy were thereby made possible. To misquote Emerson slightly, he is great indeed who can keep in the midst of the crowd the serenity of solitude.

To the teacher and public servant more perhaps than to most men, is it a comfortable word that when he rests from his labors his works do follow him. What work is more lasting in its effect than the inspiring of a body of students? What gratitude is warmer than that of a group whose tapers were lighted at one central flame? Among these who are to him a memorial of flesh and blood, let the women students whom he helped be not forgotten, for we shall not forget him.—M. I. T.

THE TRANSCRIPT EDITORIAL

Not merely the Massachusetts Institute of Technology and other institutions with which he was associated, but the city of Boston and the Commonwealth, are heavy losers in the untimely death of Professor William Thompson Sedgwick. Professor Sedgwick was an admirable example of the deep and capable scientific mind linked with a heart of sympathy and helpfulness, for his work and influence as a savant, though truly great, were overtopped by his service as a citizen. His great study was the public health, and though he studied it as a science, he was the farthest possible from being a closet specialist on the subject.

The knowledge he had gained was freely used for the benefit of all. As the biologist of the Massachusetts Board of Health, it fell to his lot to investigate and report upon epidemics of typhoid fever, and his

labors and researches were of the utmost public value. Prominent and brilliant in many learned societies, he touched no subject that he did not shed light upon, and his beneficial services were as untiring as they were various. In the curatorship of the Lowell lectures he performed a notable work of public enlightenment, and his services constantly and genially rendered to the Institute of Technology were invaluable. He was connected with many civic movements of betterment.

Professor Sedgwick was, indeed, a man who held his learning, as well as his energies, as a trust for the public benefit. A product of the New England civic conscience and a worthy child of New England's brain, it will not be easy to find his like.

THE BACTERIOLOGICAL CLUB

At its next meeting the Boston Bacteriological Club paid tribute to the memory of the late Professor William T. Sedgwick of the Massachusetts Institute of Technology. Professor Samuel C. Prescott, acting head of Professor Sedgwick's department, in his address said:

"The brief published accounts of the life and work of Professor Sedgwick have touched upon several phases of his many-sided activities and his eminence in his profession. They have failed to express adequately, however, his remarkable personality and the extraordinary influence he exerted upon his colleagues and students. Among them he will always be regarded as one of the great teachers of his time, not merely for his success in imparting knowledge, but quite as much for the ability with which he brought out their latent powers and stimulated them to find themselves, and develop individuality, serious purpose and character. In recognition of this and of the manifold other services he rendered the following tribute was prepared as memorial for the records of one of the organizations of which he was an honorary member.

"With profound sorrow and a sense of deep personal loss, we, the members of the Boston Bacteriological Club, realize that in the death of our beloved honorary member, Professor William Thompson Sedgwick, a great leader and a loyal friend has been taken from us.

"For more than a generation he had given himself unstintedly to the teaching and practice of those principles of biological science and right living which develop the highest standards of professional integrity, personal character and loyal citizenship.

"A graduate of the Sheffield Scientific School of Yale, a doctor of Philosophy of Johns Hopkins University, he brought to Technology in 1883 broad scholarship and intense devotion to the highest ideals of the teacher, the investigator and the public servant. His personal labors and fertile suggestions gave distinction to the work of the State Board of Health for many years, and he more than any other man aided in the promotion of sanitary science in America. No worthy movement for education or for social betterment was beneath his careful attention. No student of his, seeking truth or struggling for self-expression, ever failed to receive inspiration, help and encouragement. In success or in

adversity he was a loyal and helpful friend, the soul of honor, courtesy and kindness.

"The keynote of his life was service, and when in his later years he worked constantly with the knowledge that for him there might be no tomorrow, his zeal and industry never flagged, and he faced the future with serenity and undaunted courage. Faithful unto death, he passed from us as he would have wished — in the very front rank of active service. In his devotion to his State and country, to the institution which he served with such loyalty and distinction, to the scientific bodies which his membership enriched, to the scores of men and women he inspired and assisted to make for themselves positions of responsibility, honor and public usefulness, and to the hundreds who were proud to claim his friendship he was an illustrious example of the scientist, the servant of his people and the true gentleman.

"Saddened as we are by our great loss, we rejoice that in the honors bestowed upon him during his life came some of the high and richly deserved rewards for his unselfishness and greatness of service, and that he knew the deep affection and appreciation with which he was everywhere regarded. Especially we rejoice that we were permitted to know him, and that our own lives have been touched and influenced by his nobility of character and inspiring comradeship."

THE SHARON SANATORIUM

Sharon Sanatorium directors and friends met to celebrate the thirtieth anniversary of the sanatorium and to honor the memory of the late Professor W. T. Sedgwick, who was for many years president of the corporation. The meeting had been planned by Professor Sedgwick just before his death.

Dr. Vincent Y. Bowditch, medical director of the sanatorium, speaking of Professor Sedgwick, said:

"For nineteen years he was the steadfast friend and counsellor for the interest of the sanatorium, to which he gave his time and best thought generously. To him the directors owe much of the success and prestige which the sanatorium has attained. To them his loss is irreparable. Of my personal sense of loss this is not the time or place to speak. I can only give my testimony to his sterling strength and purity of character, to his never-failing courtesy and kindness to all; to his calm and wise judgments. As a co-worker in the interests of the sanatorium, he was the friend always ready to give the cheering word in times of stress or discouragement; the kindly critic, always constructive, never obstructive.

"It was inexpressibly touching to us all to learn that on the day preceding his death he had written and perfected for the sanatorium over his own signature, an appeal that was to be sent out broadcast, asking for the continued and generous support of our work. This appeal was received by us on the morning of the day he died, and is a deeply touching evidence of his devotion to the work up to the very last. It will soon appear with an appropriate explanation by the directors."

DR. ERNEST FOX NICHOLS

Technology's next president

ON March 30, 1921, Dr. Ernest Fox Nichols was elected President of Technology. Through his appointment, Technology is about to welcome the leadership of another great scientist and educator.

From his youth, Dr. Nichols has been interested in science and by his industrious and versatile researches, he has become one of the foremost investigators of his day. But not only in research has he been recognized as a power. His keen foresight and executive ability have placed him in many administrative positions of importance. This ability was markedly demonstrated when he undertook the re-organization of the Physics Department at Dartmouth during his professorship there. Under his efficient leadership the department became one of the strongest in the college. These abilities both as a research investigator and as an efficient administrator make Dr. Nichols doubly fitted to assume the leadership of Technology and to guide her on her new plans of service.

It is worthy of note that Dr. Rogers founded Technology with the belief that scientific and technical studies were a requisite for a thorough education. Dr. Nichols has proven the truth of Dr. Rogers' statements for, although he never received an arts degree, Dartmouth called him to be her president. This was a declaration of the fact that a great scientist could be as fit a man to govern an academic institution as a man of classical training.

A brief review of the many activities of Dr. Nichols will lead to a better realization of his great accomplishments.

He was born at Leavenworth, Kansas, June 1, 1869. In 1888 at the age of nineteen he received his B.S. from Kansas Agricultural College. The following year he spent in teaching in the West. Then for several years he took work in mathematics and physics at Cornell University. He was rewarded with the degree of Master of Science in 1893 and in 1897 the degree of Doctor of Science. While at Cornell he held the Erasmus Brooks Fellowship.

In 1892, Dr. Nichols was called to Colgate University where he occupied the chair of astronomy and physics for six years. While there he began his work on stellar and solar problems for which he later became famous. Two of these six years he spent in Germany, where he studied under Professors Planck and Rubens of the University of Berlin. While studying there, he improved the Crookes radiometer, developing it to the high state in which it occurs today. With this he was able to carry on experiments for the measurement of the speed of light and the planetary heats all of which is far beyond the average lay mind. His works while in Berlin were received and published by the Royal Prussian Academy of Sciences.

In collaboration with Professor Rubens, he carried out a very difficult and laborious research which was published as "Certain Properties of Heat Waves of Great Wave-Length." This was a revolutionizing piece of work and was characterized by his balanced and analytical method of procedure. It was made possible only through the greatly improved instruments which he had invented and led physicists to an entirely new method of attack on the subject.

In 1896 and 1897, after his return to America, Dr. Nichols used his newly developed radiometer at the Yerkes and at the Mount Wilson Observatories in California. Here he successfully measured the quantity of heat reaching the earth from Acturus and Vega, and also from Jupiter and Saturn; *i.e.*, from fixed stars and from planets. The radiometer which he used was so sensitive that it could easily have detected the heat from a candle at a distance of sixteen miles.

Dartmouth College appointed Dr. Nichols head of the Physics Department in 1898. His success as an organizer there has already been mentioned. In the realm of research, his successes were even greater. In the Wilder Laboratory he worked in conjunction with Associate Professor Hull on further measurement of heat values from planetary bodies.

After several attempts, he succeeded in 1901 in measuring the pressure of a beam of light. This had been detected by other physicists, but had never been measured. The research won him world-wide recognition. During this period he also made important contributions to the radio-active and the electro-magnetic theories.

Columbia University called Dr. Nichols from Dartmouth in 1903, but before leaving, he was given the honorary degree of Doctor of Science by Dartmouth. In Columbia, and later as a lecturing professor he continued valuable research. For two years he was made Ernest Kempton Adams Research Fellow. He remained at Columbia until 1909.

In this year he was again called to Dartmouth, this time to become its president. During Dr. Nichols' inaugural exercises Dartmouth bestowed the honorary degree of Doctor of Science upon the late President Maclaurin. It was at this occasion that President Maclaurin said of Dr. Nichols:

"I am intimately acquainted with Professor Nichols, as I have been associated with him at Columbia during all my connection there. I could not imagine a better man for the place. He is dignified in bearing, but warm-hearted — the type of man to have keen personal interest in the students, yet without too great familiarity. He is a man of high scientific attainments, broad human sympathy and pleasing personality in every way. He is of the quiet type that knows his own mind and how to carry out his ideas in a quiet, forceful way. And not only does he possess a profound knowledge of science, but he also has a deep appreciation of literature and art."

After seven years of service at Dartmouth he went to Yale University as professor of physics where he remained until 1920. From

1917 to 1919 he served in the Bureau of Naval Ordnance, where he carried on important research work chiefly on optical instruments. During the last year he has been made director of physical science at the Nela Park Research Laboratory.

Among the honorary degrees which he holds are Doctor of Science from Dartmouth, University of Vermont, University of Pittsburgh, and Dennison; LL.D. from Colgate, Clark and Wesleyan.

He is the possessor of the Rumford Medal of the American Academy of Arts and Sciences, and is a member of the National Academy of Sciences, of the American Philosophic Society, of the American Physical Society, the American Astronomical Society and the Washington Academy of Sciences. He is a collaborator of the *Astrophysical Journal*, and an associate editor of the *Physical Review*.

These facts prove better than words the great preparation of achievement Dr. Nichols brings with him.

It might prove of interest to learn the opinions of Dr. Nichols on matters of everyday college life and experience. In regard to the purpose and ideals of a college Dr. Nichols states:

"To all it should give sound training in those analytical powers of reason upon which sane judgment must ever rely for its validity and it should offer that knowledge of economic, social and political problems essential to enlightened and effective citizenship. The college should aid its students to understand what man is today by filling in the background, physical, mental and spiritual, out of which he has come in obedience to law. The whole current of college life should be so directed as to foster the finer qualities of mind and spirit which give men dignity, poise and that deeper sense of honorable and unselfish devotion to the great and common good."

It would seem that Dr. Nichols favors the plan of prescribed subjects of study as followed here rather than the group or elective systems found in some colleges. On the elective system his views are:

"Under this unhappy system, or lack of system, for every student who gains a distinct advantage by its license several of his less purposeful companions seek and find a path of least resistance, enjoy comfort and ease in following it, and emerge at the other end, four years older, but no more capable of service than when they entered. Many another youth, neither lazy nor idle, but lacking both rudder and chart, angles diligently in shallow waters, goes no deeper than the introductory course in any department, comes out with many topics for conversation, but no real mental discipline and but little power to think."

Dr. Nichols' views on the reasons for the selection of a course would naturally fall upon a sound basis. He would have ability the basis of selection: — "Enthusiastic parents, heedless of taste and fitness, too often urge their sons into scientific pursuits, not realizing that lack of intellectual preference in a boy is inadequate proof that he possesses that balanced mind which scientific investigation requires, and unusual pleasure at riding in an electric car is insufficient evidence of a marked capacity for electrical engineering."

He also believes in personal effort as the only logical means of procuring an education. His views on this matter are an indication of his characteristic ability to appreciate human nature.

"Whatever knowledge and trained faculties a student may have acquired at graduation depend more upon the man and less upon the college. Colleges may provide the richest opportunities and the fullest incentive, but that which lies beyond is work the student must do himself. College, like life, is whatever the man has industry, ability and insight to make of it. 'They also serve who only stand and wait' was written to console blindness and advancing years, not as an apology for strength and youth."

As a great investigator and teacher, his own views on what a teacher ought to be are well worth knowing. He says: "We need special knowledge in college teachers, but not specialized men."

There is probably no better example of the philosophy of this great scholar, and secret of his success than in the following statement:

"Science in the university may have misled the thoughtless to some extent by an emotionless discussion of facts, but facts should be discussed without emotion; it is the lifeless statement of purpose from which we suffer. The driving power of intellect is enthusiasm, and there is no lack of it in that passionate devotion to research which so painstakingly and properly excludes all warmth from its calm statement of results. Yet there is nothing short of a divine zeal, an irresistible force, which urges the true investigator on to those great achievements, which are so profoundly changing the habits of our daily life and thought. For any mental indifference therefore, be it real or assumed, science is in no way responsible. Science takes herself seriously and is always in deadly earnest."

These selections illustrate Dr. Nichols' charming style and sound judgment on humanistic problems. His dignity and loyalty; his firmness tempered with a vein of sentiment; his appreciation of art, literature, and music; his ability to view a situation with cool and unprejudiced reason; and his great altruism which has kept him at serviceable tasks for which the world offers little material reward, are all qualities which do much to fit him as a leader for young men. He says: "The vast majority of college men are sound in mind and heart and purpose and no young men are ever worthier of admiration and respect than these." — *Tech Engineering News*.

NEWSPAPER COMMENT ON DR. NICHOLS

What local papers say of the new president

Boston Transcript THE election of Ernest Fox Nichols as the president of the Institute of Technology means primarily that there is to be no break in the lines of progress which the late Dr. Maclaurin laid out for the future of the Institute. The past president and the new president of Technology were close personal friends. Each had a high regard for the intellectual and executive attainments of the other. But, more important still, their views on the subject of scientific education coincide, and Dr. Nichols is a full believer in the theory, first enunciated by President Maclaurin, that an engineering school is not doing its complete duty to itself unless it establishes the closest possible relations with the industry of the country.

So the Technology Plan, as the new arrangement between Institute and business has been called, will now be carried to still further efficiency and probably to more distant places. This welcome expectation is the better grounded because of the fact that for a year or so the new president of Technology has himself been associated with large industrial interests. He brings to Boston not only unusual ability as teacher and investigator but a first-hand acquaintance with the problems which are confronting the country in the development of its industrial resources.

Once again, then, our chief scientific school has an eminent scientist for its president. As a practical student of the questions which baffle men, as a research worker and discoverer in the realms of astronomy, mathematics and theoretical engineering, Dr. Nichols enjoys an international distinction. His name is almost as well known in the laboratories of Europe as it is in the classrooms of his own country. He has taught at Yale, at Columbia and at Cornell. He has once before been president of one of our leading colleges. He served America well in the Great War. His coming to Boston should react to the certain advantage of the city, the Institute of Technology and the cause of scientific education in general.

Boston Globe The president of Technology occupies one of the key positions of our New England life; in fact, one of the key positions of our whole modern life. He is an educator of technicians who shall manipulate the complicated machinery of our industrial civilization. These technicians and the man who trains them are as vital to all three classes of passengers, first cabin, second cabin and steerage, as navigators on the bridge and engineers at the levers.

To President Nichols' competency the impressive record of his labors and his achievements amply attest; a seasoned teacher, an experi-

enced college president and an eminent investigator. He is the scientist at the head of a scientific institution.

The signification of that term is, however, broadening. A school can teach the use of tools. But more than skill with tools is coming to be needed in our industrial society. The nineteenth century pretty much mastered technical production. The twentieth has a different task. Time was when technical skill alone sufficed. That time no longer is. Production — to say nothing of distribution and use — has become vastly complicated with human relationships. Not alone how to use tools, but to what end, is now the question.

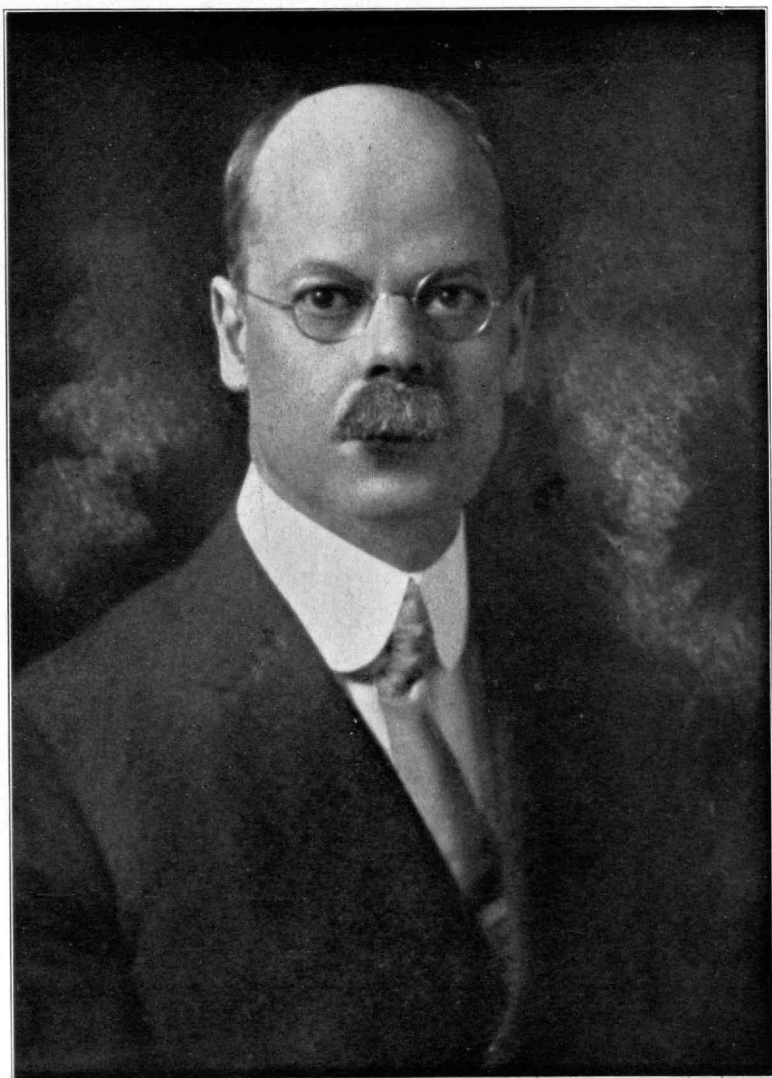
Engineering, therefore, is broadening into the field of social problems. To mechanical engineering is being added the science — it should be and may be such — of social or human engineering. The men who are being trained at Technology are destined for positions of great power and influence. It is highly expedient that they know not only scientifically how, but socially whither.

The selection of Dr. Ernest Fox Nichols as president of the Massachusetts Institute of Technology needs only a brief reference to his career to demonstrate his fitness. Dr. Nichols has behind him his service as president of Dartmouth, which he began in 1909, resigning in 1916 to pursue his special interests as a professor of physics at Yale. For a man of fifty-two his has been an unusually ripe experience and a remarkably fruitful career. His development during the war, while associated with the Navy's ordnance bureau, of certain valuable optical devices "the exact nature of which" it is said, "cannot even now be disclosed" lends something of a mysterious interest to his name. But what matters is that he is an able scientist with capacities for administration. Memory does not, for the moment, recall another man who has been the head of two of New England's educational institutions as important as Dartmouth and Tech.

Springfield
Republican

WHAT MACLAURIN SAID ABOUT HIS SUCCESSOR

I AM intimately acquainted with Professor Nichols, as I have been associated with him at Columbia during all my connection there. I could not imagine a better man for the place. He is dignified in bearing, but warm-hearted — the type of man to have keen personal interest in the students, yet without too great familiarity. He is a man of high scientific attainments, broad human sympathy and pleasing personality in every way. He is of the quiet type that knows his own mind and how to carry out his ideas in a quiet, forceful way. And not only does he possess a profound knowledge of science, but he also has a deep appreciation of literature and art."—*A statement made by the late President of Technology when Dr. Nichols was chosen president of Dartmouth.*



Photograph by Hohen

LEONARD METCALF, '92
President of the Alumni Association

SERVICE A STIMULANT TO ACTIVITY IN SOCIETIES

BY LEONARD METCALF, '92

President of the Alumni Association

I HAVE been asked by the editor of THE TECHNOLOGY REVIEW to contribute a "pastoral letter," a sort of "homily," outlining certain policies of the Alumni Association, which may serve to interpret some of its activities.

In this day of incessant demand upon one's time and means, the man who would accomplish anything, who would end some, at least, of the things begun, must select his activities and direct his effort, lest he be unproductive, without influence and in the condition of the "vaudeville mind."

Where an earlier generation of club men was wont to exclaim, "Oh, how dry I am!" the man of today ejaculates, "Oh, how sick I am of men who talk and get nowhere!" He reverts to the primitive insistence of the child who cries, "Let's do something!"

The problem of vitalizing our societies — be they professional, trade or educational — is one of constantly finding and presenting to their members new opportunities to do something — new fields for fruitful service.

This goal can best be attained by co-operative effort, by good team play. There is needed the line of contact with men and affairs, to give stimulus; the line of experience and discrimination to determine availability and limit effort to tasks which can be fulfilled; the line of preparation for the well-rounded presentation of the subjects chosen; and the "rush" line to carry the message of truth to the audience addressed.

The greater the number of men drawn into the discussion, the wider its subsequent influence and generally the broader the viewpoint.

My point of beginning as president of the Alumni Association, was a dinner given to a group of its past-presidents. This served to orient me and put me into touch with some practical possibilities and some limitations to effort on the part of the association.

Next I responded to the resourcefulness of an energetic secretary, an old and tried friend. Then I began to react to the varying points of view held by the members of the executive committee, of the Council and of the Alumni Association with whom I came into active contact. I began to realize the complexities of the problem of the larger institution, as never before; the impetus of the search for knowledge, and the force of the efficient machine; and some of the difficulties and even dangers of the conditions to be met and dominated. I became impressed anew with the effect of the well-directed effort and support, which has so long characterized the workings of this body of men, — men with definite purpose who have maintained a keen and consistent interest

in the current life of their alma mater. Signs of the times, of the tendency toward more general democratization of effort, were not lacking, but the contrast between the quiet, direct and effective work of experienced men like these, compared with what has been happily characterized, by Harry Horn of the Class of '88, as the abortive work of the "intermittent thoughtless thinker," was striking.

I came to recognize, as have all men who have taken an active interest in such affairs, the tremendous power for good latent in such a body of men, and with my associates to study means for its further development and utilization.

The governing purpose of the present executive committee, as of its predecessors, has been to prepare for the meetings of the Council,—first, vital problems; second, fair presentations of the conflicting points of view involved — the pros and cons in short; third, problems leading to service rather than to academic discussion; fourth, problems touching student activities, in which the alumni could play a helpful part; fifth, informative discussions to put the alumni more closely in touch with important changes in method or thought at the Institute. The idea was ever before us that at the meetings of the Council men must be given that which would make them feel that they had been repaid for their expenditure of time in attendance and participation in discussion; that anything short of this must inevitably lead to loss in interest and reduced attendance, particularly of the men whose experience was widest and whose judgment was most desired; that the discussions must contain for the representatives something to take back to their organizations; something of active interest to their members; something, if possible, lending itself to constructive effort on their part.

Take, for example, the subject of "Limitation in Numbers of Students," recently under active discussion by the Council. It is a big subject. It is pressing. It is vital. But it is dangerous, because men discuss it from past, rather than present, viewpoints; from their own collegiate days rather than the conditions of today. Hence its desirability as a topic of discussion by the Council was viewed by the executive board with some doubt and misgivings.

But when it appeared that men were discussing it outside, were often uninformed or at least inadequately informed upon it, it seemed wiser to present it, in order to broaden vision, correct some misapprehensions, and to get the benefit of the constructive thought which might come from such a representative body of men, many of whom were leaders in their respective business fields or professions.

So the subject was taken up and presented in the first instance by men of varying points of view, some of them responsible for the conduct of Institute affairs; some, students of the problem, although not having such responsibility; some, facing similar problems though not in the academic field. A most interesting discussion resulted at two successive meetings, shedding much light on a very difficult problem and setting many men to thinking on lines new to them.

Good must flow from such an effort. One man may become actively

interested in the educational problem—in methods of teaching, in outside influences, in large versus small student sections; another in the health and athletic activities of the students; another in the housing and social influences surrounding him; or perhaps in the administrative or financial problem involved to the Institute. All are important. All are vital to the Institute and to the student. All will well repay individual effort on the part of the men thus stimulated to thought and action. All tend to build up alumni activity, *esprit de corps* and co-operative effort. Methods of education benefit and become better suited to the needs of the day, for the alumni are in a better position than are the faculty to promptly sense these changing needs.

To the individual there is much pleasure in the effort; to the president and the executive committee real joy in the work, if they are so fortunate as to have the cordial assistance of a secretary such as Walter Humphreys—always responsive to suggestion, desirous of following out new trains of thought, well-informed, discreet, and a good executive.

Many important problems lie before us in which we can help if we co-operate as the Council well knows how to do—the specific needs of the new president, the development of a director of alumni, the housing problem, student morale and activities, the Technology plan, an outlet for the faculty in research and in contact with practical affairs and encouragement of new fields for the development of the breadth of vision and the personality of the instructor and the student.

The field will be an abundant one so long as the spirit of co-operation guided by constructive effort shall prevail.

But we must keep clearly in mind the practical limitations of alumni effort. We cannot run the Institute though we can assist by helpful suggestions. Our conduct and discretion, rather than assertion of right or privilege, must command the confidence of the Corporation and the Faculty. We must make ourselves *persona grata*, sought for helpful suggestion and constructive co-operation, if we would justify the possibilities, the true destiny, of the Alumni Association. The desire of the Council to do really helpful, friendly and co-operative work, for the advancement of the Institute, of the State and Government, and of education, has long been recognized by the Institute authorities. By none more keenly than by Dr. MacLaurin. To the new president—whoever he may be—we pledge our best efforts and our cordial and active support.

THE NEW PRESIDENT OF THE ALUMNI ASSOCIATION

A. D. Little, '85, to take office in June

ARTHUR D. LITTLE, '85, chemical engineer and president of the Arthur D. Little Company, Inc., of Boston has been chosen president of the Alumni Association for the coming year.

The nominating committee named but one man for the position. The term of the president is one year. Mr. Little will succeed Leonard Metcalf, '92.

Other nominations are: vice-president, two years, Merton L. Emerson, '04; secretary-treasurer, one year, Walter Humphreys, '97; two members of the executive committee, two years, Charles W. Aiken, '91, Allan W. Rowe, '01; five representatives-at-large on the Alumni Council, Edward Pennell Brooks, '17, Henry J. Carlson, '92, Nathan Durfee, '89, Charles R. Main, '09, Charles P. Wetherbee, '91; term members of the Corporation, three to be chosen, five years, Leonard Metcalf, '92, Van Rensselaer Lansingh, '98, Burt L. Fenner, '93, Frank L. Locke, '86, Frank B. Jewett, '03, Fred E. Wilson, '91.

The three men who are chosen from the last group for membership on the Corporation will have a voice in the selection of a president for the Institute.

Mr. Metcalf, the retiring president of the Alumni Association, is a Boston man, a member of Metcalf & Eddy, consulting civil engineers. He has been associated with Mr. Eddy in this practice since 1907. Before that time he was professor of mathematics and engineering at the Massachusetts Agricultural College and director of the Hatch Experimental Station under the Meteorological Bureau at Amherst for two years, from 1895 to 1897. Following this he went into private practice which he continued for ten years and then went into partnership with Mr. Eddy.

He is a past president of the American Water Works Association, the New England Water Works Association and the Boston Society of Civil Engineers; a past vice-president of the American Society of Civil Engineers, a member of the American Society of Mechanical Engineers, the University Club of Chicago, the Engineers' and D. K. E. Clubs of New York and the Union and Engineers' Club of Boston.

Mr. Jewett, who got his degree from Tech in 1903 had previously obtained the A.B. from Throop College in 1898 and Ph.D. from the University of Chicago in 1902. He is at present chief engineer for the Western Electric Company and lives in Short Hills, N. J. He was research assistant to Professor A. A. Michelson of the University of Chicago from 1900 to 1902 and later instructor at Tech, whence he went to the American Telephone and Telegraph Company.

During the war he was a lieutenant-colonel in the Signal Corps and a member of the Special Board on Anti-Submarine Devices.

Mr. Fenner, who comes from Croton-on-the-Hudson, is a member of McKim, Mead & White, New York City architects. With this firm he has designed plans for many important projects for the Pennsylvania Railroad and other companies.

Van Rensselaer Lansingh is a consulting illuminating engineer with offices in New York City, where he lives at the Engineers' Club. He is a veteran of the Spanish War. During the recent war he undertook the foundation of the Tech Club in Paris, which was later merged with the American University Union in Paris.

F. L. Locke is a Malden man and president of the Boston Young Men's Christian Union.

Mr. Wilson is a building contractor in Nahant and has written many articles of an authoritative nature concerning scientific subjects, among them a botanical history and a treatise on industrial economics.

OVER THE WIRES

March 30, 1921.

Dr. Ernest Fox Nichols,
2432 Kenilworth Road, Cleveland, Ohio.

Technology alumni delighted by your appointment. Greet you with the pledge of hearty co-operation and active support.

LEONARD METCALF,
President Alumni Association.

March 30, 1921.

Leonard Metcalf,
14 Beacon Street, Boston, Mass

Very deeply appreciate your kind telegram and its cordial greeting from Technology alumni. The proved devotion and loyalty of Technology men is at once an inspiration and a challenge to her new president.

E. F. NICHOLS.

Cleveland, Ohio

WHY '80 HELD GRADUATION EXERCISES

An interesting sidelight on the early days — written by the secretary of '80

In the "Early History of the Alumni Association of the Massachusetts Institute of Technology," by Charles R. Cross, '70, published in the November REVIEW, 1920, a short account is given of the first public graduation exercises, that being at the graduation of the Class of '79. That was an innovation that was much approved by some of the students and very much disapproved by others. The members of the Class of '80 were unanimous in their disapproval and took measures to endeavor to prevent such public exercises at their own graduation. After full discussion in class meeting a committee of three, of which the writer was one, was appointed to call upon President Rogers and present the views of the class as opposed to any public exercises at graduation. President Rogers was asked to name a time at which he would receive the committee and he asked us to call at his house at a certain time. On our arrival we were received with the utmost cordiality and made to feel at home at once. He began the interview by showing us various works of art and of science, and especially some geological reports and maps he had recently received from abroad. We tried now and then to discuss the purpose of our interview but each time we were side-tracked by some new display or new story and finally we found ourselves very kindly dismissed without having had the slightest opportunity to present the subject we had been sent to discuss.

Naturally when the committee made its report to the class there was very much ridicule heaped upon it by the other members. Finally the writer became indignant at what he considered the unwarranted abuse and moved that the class should act as a Committee of the Whole and ask the president to meet such a committee. This move was accepted and later President Rogers met the class in the old lecture room on the main floor of our one building of that time, the present architectural building.

Here again the same tactics were repeated. President Rogers at once took full charge of the meeting, telling us very many interesting stories connected with the founding of the Institute, also of his work in connection with geological surveys, of his life as a student, and many other matters, but never referring to the subject of the meeting. Each time that any of our members tried to introduce the subject he was at once headed off by some apt story or remark and after a most pleasant half hour or more we found the meeting closed without the subject under discussion being even mentioned. The president withdrew very pleasantly and the class decided that there was but one thing to be

done, that was to accept the conditions as gracefully as possible. This was done and the exercises went off very pleasantly, much to the gratification of the admiring relatives if not to the members of the class.

But there has always been an element of sadness as we look back to that gathering upon the platform of old Rogers. It was the last occasion upon which the graduates of that day were all together. Within three months one of its members, Small, was dead, and now just fifty per cent of its graduates have passed away.

It has seemed to the writer that the method adopted by President Rogers in carrying out his own views without antagonizing his students might be of interest to others of the older alumni, hence this letter.

GEORGE H. BARTON,
Secretary of '80.

G. E. HALE, '90, AWARDED ACTONIAN PRIZE

IN recognition of his research work in solar physics, the Royal Institution of Great Britain has just conferred upon Dr. George Ellery Hale, '90, director of the Carnegie Solar Observatory at Mount Wilson, the Actonian Prize. Announcement of the conferring of the honor upon him was received today by Dr. Hale in a Marconigram from London.

The Actonian Prize is one of the highest honors that can be bestowed upon any scientist and is awarded annually to some scientist who has achieved some outstanding result in the realm of scientific research. In Dr. Hale's case the board of managers of the Royal Institution of Great Britain decided that his work in solar physics was the most worthy of recognition and awarded him the honor. Faraday, the famous scientist, did his research work under the auspices of the Royal Institution of Great Britain and it has annually given the Actonian Prize to some notable scientist for his achievements.

Dr. Hale is recognized throughout the world as one of the foremost scientists of the day and has been signally honored on several occasions by both American and foreign institutions in recognition of his scientific accomplishments. The Paris Academy of Science accorded him the Jansen Medal in 1894, and in 1902 he was given the Rumford Medal and a year later the Draper Medal. In 1904 the Royal Astronomical Society honored him with a gold medal and the following year the Bruce Medal was presented to him from the Astronomical Society of the Pacific. The Astronomical Society of France has also presented Dr. Hale with a gold medal.

Dr. Hale is a member of numerous scientific organizations and has degrees from eleven leading educational institutions, the University of Pittsburgh, Yale, Victoria University, England, Oxford, Cambridge, University of Chicago, Columbia University, Beloit College, University of California, Princeton and Berlin University.

THE PRESIDENT'S REPORT

A year of great growth and many changes —
problems of the interregnum

TECHNOLOGY has grown remarkably during the last year, according to the report of Acting-President Elihu Thomson for the year 1919-1920. The roster of students has greatly increased since last year over all previous years, necessitating a rearrangement of teaching facilities. All of the departments have been exceedingly active and several changes have been made in them.

Registrar Walter A. Humphreys reports the following statistics in registration: The registration up to November, 1920, showed a 67 per cent increase over that of 1918-1919 and a gain of 57 per cent over the largest previous registration, that of 1915-1916. There was a 35 per cent increase in the number of students of other colleges entering the Institute, 40 per cent of whom entered the upper classes.

The chemical and graduate courses showed the largest increases in the number of students registered. More students, in proportion, now come from a distance than from adjoining districts. The Western States lead in this increase, the South Atlantic and the North Atlantic following in the order named. Foreign students constitute 3 per cent of the student body now, 32 countries being represented. Canada sends 38 students and China 40, these being the largest aggregations from foreign countries. The average age of the tender freshman is 18 years and 11 months. The professional courses showed a larger proportional increase than the scientific, 76 per cent against 38 per cent. The mechanical engineering course still has the largest number of students. Following it comes the chemical engineering course, and after that the course in engineering administration.

Undergraduates received 317 scholarships of \$295, awarded by the faculty committee. A total of 358 students received aid through action taken by this committee.

A bonus was awarded the instructing staff in lieu of an increase in salaries. This action was only temporary and, as soon as a careful consideration of the matter can be made, permanent action will be taken. To accommodate the increase in the number of students, the classes were subdivided into smaller units, various courses were repeated, and the number of instructors was increased.

An event of importance was reported for the department of civil and sanitary engineering. The War Department has decided to send a group of 37 officers to complete the requirement for obtaining a bachelor's degree in that department. They will attend the regular classes. The ninth session of the surveying camp showed that the cost for food and

miscellaneous expense of students was reduced from \$1.47 per day, of the previous year to \$1.46, the total charge being \$77.38 per man. The camp in underground surveying was held at Park Hill, near Corinth, Conn. The department also reports that the demand to fill jobs classified under this head far exceeded the supply, especially on sanitary engineering.

Prof. William Emerson has succeeded Prof. Stephen Codman in charge of the architectural department. He was engaged to reorganize the department. Mr. Albert Ferrán has been obtained as a professor in architectural design. He is a graduate of L'Ecole de Beaux Arts and winner of the Grand Prix de Rome in 1914.

The department of chemical practice in engineering has resumed its activities under the leadership of Professor Haslam. Three stations are in operation, one at Bangor associated with the Eastern Manufacturing Co., and the Penobscot Chemical Fibre Co., one at Buffalo in conjunction with the Lackawanna Steel Co., and the Larkin Co., and one at Everett, Mass., in co-operation with the Merrimac Chemical Sugar Refinery and the Boston Rubber Shoe Co. The du Pont fellowship has been in existence the last two years. The Monsanto Chemical Co. donated a fellowship last year and the Grasselli Chemical Co. one this year.

The department of industrial co-operation and research has been exceedingly active in the last year. This department was organized a year and a half ago for the purpose of obtaining closer contact between manufacturers and contractors and the Institute staff, so that the professors could work on the solution of such problems as were submitted to them. The department reports that the plan is an unparalleled success. Up to November 6, it has handled 406 queries. There are 204 companies contributing and the annual retaining fee for this service amounts to over a quarter of a million dollars. The plan has not struck a blow at pure research, as was thought by some, but has provided the means whereby more of an opportunity for this kind of work is available. For this purpose there is an annual fund of \$6000 and this is constantly growing.

In order to carry on its work the department is undertaking to index over 3237 names of men who are especially able to solve problems which come in the scope of the department. These names will constitute a Technology "Who's Who," as all of them are former students of the Institute. The department has also undertaken the task of arranging for the employment of Institute undergraduates after graduation, by cataloging a record of their work and qualifications and arranging for personal interviews between the students and representatives of various companies. This work will in a way supplement the efforts of the various departments now.

The reports of the department heads contain information of many important changes during the year. The mechanical engineering department has secured a large number of lathes for the machine tool laboratory. These lathes were bought from the Government at a very low

cost, and since their installation the laboratory has become the best of its kind in the country.

Freshman drawing has been taken over by the department of architecture, and it is now known as the division of drawing. A plan has been instituted to interchange instructors between this division and the professional departments. This has served to give a more professional point of view to the freshman work. No doubt it will also prove beneficial to the upper classes in the long run, but at the present time it is acting as a drawback to the students. The instructors in descriptive geometry cannot be expected to have a thorough acquaintance with the teaching of the professional subjects the first year that they take such classes, but if the same men are exchanged each year, this objection will soon be eliminated.

Other important changes in organization include the combination of Courses III and XII into one department of mining, metallurgy and geology, with Professor Lindgren in charge. The course in chemical engineering has been segregated from the department of chemistry. Professor Lewis is at present at the head of this new department.

One thing which is brought out in the report is the crowded condition of the Institute. Many departments are decrying their lack of room, and they are looking forward with eagerness to the time when the Pratt Building will be ready for use. It is not at all certain, however, that this building will be sufficient outlet for the overflow of students. Looking forward two or three decades, one can easily imagine this entire plot of land covered with buildings filled to capacity, and in that case further expansion would become impossible. It would be well for the Institute to buy available land in this vicinity to guard against such a contingency.

THE 1895 CLASS BOOK

Mr. Brackett disclaims credit

"I JUST received my copy of the TECHNOLOGY REVIEW and want to thank you for the article you put in referring to our '95 book.

There is one thing I would like to correct however. The man who really had the most to do with this book and put in the most work on it is T. B. Booth, president of the Class, of the firm of Emery, Booth, Janney & Varney. I know you appreciate the amount of work in connection with the tabulating and issuing of a book of this sort, and when I tell you he did most of it, you will realize how much the Class of '95 is indebted to him."

(Signed)

W. C. BRACKETT.

A YEAR OF THE TECHNOLOGY PLAN

Two hundred and four industrial concerns make contracts with the Institute — The "M. I. T. Who's Who"

THE Division of Industrial Co-operation and Research of the Massachusetts Institute of Technology, more familiarly known as the "Technology Plan," has proved of great benefit both to the Institute and to the industrial world, according to a report of the activities of the division during the first year of its existence. Conceived during the endowment fund campaign in the fall of 1919 under the direction of Professor William H. Walker, formerly of the chemical engineering department, and now under Professor Charles L. Norton of the department of physics, the so-called "Plan" entered into contracts with certain manufacturing concerns for the purpose of enabling contractors to present the problems and queries upon which they desire help to those officers of the Institute or members of the faculty in whose department these queries naturally fall, and to make available to the contractors those facilities of the Institute which may be helpful to them in solving the problems. In the twelve months past two hundred and four companies have entered into such contracts, the annual retaining fee being over one quarter of a million dollars.

The experience of the year has shown, says the report, that the principles on which the arrangement is founded are fundamentally sound and that, while some few details of its administration still remain to be worked out, its success is assured. The contractors have profited by having at their disposition sources of information not otherwise available, while the Institute has been enabled to further research work in many phases of pure science. The financial assistance of the plan is easily appreciated; but in addition the intimate contact established with progressive manufacturing concerns has proved a great stimulus to the educational and research activities of the different departments. The fact that work of moment is being carried on in its laboratories and that great industries are looking to Technology for the solution of many of their basic problems becomes known throughout the instructional force and the student body, permeating even to the members of the lowest class. A keener interest is thus taken in acquiring that knowledge and experience which is being daily shown to be of value and importance alike in the enrichment of the individual, and in the progress of the community.

One of the important activities of the division has been to foster the use of the Institute's Central Library, for although this collection of books, papers, and pamphlets relating to engineering and other technical subjects is the largest of its kind in the United States, it has

been used to only a limited extent by those not directly connected with the Institute. The library staff has been strengthened and the division has offered to furnish abstracts of any special data, to photostat printed matter of whatever sort, as well as to make translations from any of the modern languages.

In inaugurating the Technology Plan, one of the Institute's agreements was to provide and maintain a record of the qualifications, experience, and special knowledge of Technology alumni, to be available for the latter in addition to the concerns who made contracts. Requests for the necessary data for compiling this record from which would be obtained information regarding men for permanent employment, and those who had knowledge of special problems, and information as to where special knowledge and experience could elsewhere be found, received a very satisfactory response, and a list of about six thousand former students of the Institute is now available in what is called the "M. I. T. Who's Who."

Although the heads of the various professional departments, because of their intimate personal knowledge of the men in the graduating class, are in the best position to recommend these men for positions, the division has undertaken to make more readily available to the contractors under the Technology Plan the records and qualifications of students as they finish their courses at the Institute, and in connection with the heads of departments, to arrange for personal interviews between the graduates and industrial employment managers. This endeavor is to supplement rather than displace, what is now being accomplished by the different departments in placing their men, and has proved a substantial aid in this work.

At the time of the establishment of the Technology Plan, the impression prevailed among some educators that the work entailed in the execution of the contract would stifle research in pure science, and would therefore in the end prove a detriment rather than an aid in the scientific progress of the community, but this view, the report declares, has been found entirely erroneous. The great industrial corporations with their broad outlook toward the future have no such view and, as a matter of fact, the plan has enabled the immediate provision for carrying on research in pure science.

For this purpose an annual sum, now \$6000 and constantly growing, is available, and is already showing that instead of stifling pure research, the Technology Plan is a direct stimulus to workers in this field. A part of the fund is being used in the support of research carried on at the Institute, while an almost equal portion is being expended in the support of work not at the Institute nor in any way connected with it.

IMPORTANT SUMMER SCHOOL PLANNED

Exchange professorships — courses in public health — usual camp

FURTHER evidence of the Massachusetts Institute of Technology's policy to co-operate with industry and activities connected with the public welfare is shown in one of the courses to be given in the summer session for the first time this year. This is the course in methods of teaching hygiene and public health in the public schools to be given by Clair E. Turner, M.A., C.P.H., assistant professor of biology and public health in the Institute. Both the State Board of Education and the Boston Public School Committee have given official sanction to the course and will advertise it widely, and the Boston School Board will receive the certificate issued on completion of the work of the course as an evidence of advanced standing.

The new course is designed for teachers or for school nurses who have teaching responsibilities, and covers the methods of classroom teaching, project work and the development of health habits. It will include a discussion of the most recent and important developments in personal hygiene and public health, the co-ordination of the various phases of school hygiene and new methods of teaching as they have been developed both by Professor Turner and by other health workers in various parts of the country.

The work will begin on Wednesday, July 6 and will end on Friday, August 12. In offering the course the prospectus of the summer session, which will be issued this week, takes note of the fact that normal schools in the past have not given courses to teachers in hygiene and health teaching, with the result that present methods of instruction in hygiene are very poor and in many cases the subject is entirely neglected. It also points out that school health work is frequently inefficient because of its various phases — medical supervision of the children, the teaching of physical training, the teaching of health habits, personal and public hygiene, the sanitation of the school building, and the health of the teaching force — have never been co-ordinated, unified, and relegated to their proper places by either the superintendents or the teachers. Thus most city schools lack an organized plan for health teaching among the various grades. To correct some of these errors and supply some of the needs is the object of the course. Only a few days before his death Professor Sedgwick gave his hearty approval of this summer course and he was influenced in his opinion through the belief that the great saving of life in the next generation must be through better personal hygiene, consequently dependent on education.

The summer session of the Institute will begin this year on June 13 and end on September 30. A new office has been created, that of director of the summer session, and Professor Charles F. Park, professor of mechanism, director of the mechanical laboratories and director of the Lowell Institute School for Industrial Foremen, has been chosen to fill it. The executive officers of the session, aside from Professor Park, are Ralph G. Hudson, assistant professor of electrical engineering; Addison F. Holmes, assistant professor of applied mechanics; and Howard B. Luther, assistant professor of civil engineering.

With the exception of four, all of the staff of the summer session are from the Institute's regular teaching force. An exchange has been effected with the University of California whereby Professor Harry W. Tyler, head of the department of mathematics of Massachusetts Institute of Technology, goes to Berkeley for the summer and Thomas M. Putnam, Ph.D., professor of mathematics in the University of California, comes to Technology to give a course in analytic geometry and calculus. Miles Walker, M.A., Sc.D., professor of electrical engineering in the Victoria University of Manchester, England, comes for special work in his subject and Charles L. Stone, assistant professor of psychology in Dartmouth College, will give a course in applied psychology, the first of its kind to be given in a summer session of the Massachusetts Institute of Technology. It will present the various uses of psychology in industry, dealing especially with employment psychology and industrial relations and taking up incidentally advertising and salesmanship. Professor William N. Duffus of the College of Business Administration of Boston University will offer courses in political economy.

While the summer session was originally started to give those students who had conditions an opportunity to make up their work, it has now come to be a supplementary term to the rest of the school year with four general classes of courses: required courses, elective courses, courses in entrance subjects and courses differing from the regular subjects of the Institute. The requirements for admission, the work performed and the final examinations in general correspond with those of the regular school year and similar records and reports will be given. Last year the registration showed that a large majority of the students were anticipating in the summer session the regular work of the Institute by getting certain courses disposed of so that they might have more time for the rest of their work during the regular terms. It has also proved of great benefit to those students who enter the Massachusetts Institute of Technology from other colleges, either before or after graduation, and who have not had all the subjects which the technical school requires.

Some of the regular courses of the Institute require attendance at the summer session and in this connection the summer surveying camp, located at East Machias, Maine, is carried on. This camp consists of eight hundred acres on which are buildings with a drafting-room, lecture-room, assembly hall, dining-room and kitchen. The students sleep in tents on raised wooden floors. Expenses are shared

co-operatively and a limited number of students aside from those of whom the work is required are admitted.

Last year the registration at the summer session was fifteen hundred. Preparations have been made this year to accommodate a larger number.

FREEMAN, '76, BACK FROM CHINA

Remodels Chinese canal

JOHN R. FREEMAN, '76, has recently returned from China, where he has been working for the Chinese government on the plans for the remodeling of the Grand Canal of China, the great Chinese artificial waterway, the first parts of which were built some five hundred years before our era.

He is now working on the proposed new method of controlling the floods of the Huai River. This will reclaim thousands of acres of land for agriculture. He is also engaged in designing a method for confining the waters of the great Yellow River, the cause of much destruction in China, in a new straight narrow course. This will deepen the channel and force the river to carry its sediment out to sea, instead of depositing it at its mouth.

Mr. Freeman received his degree from the Institute in 1876 in civil engineering and was later honored by Brown and Tufts with a D.Sc. Since 1886 he has been a consulting engineer on water power and mill construction to various manufacturing companies of the country. He has been consulting engineer on the water supply of New York City and California, on the Canadian Government Conservation since 1910, and consulting engineer for the Chinese Government since 1917.

Mr. Freeman is a trustee of Technology and a Fellow of the American Academy of Arts and Sciences. He was president of the American Society of Civil Engineers and chairman of the National Advisory Commission for Aeronautics during the war.

SHALL TECHNOLOGY LIMIT ITS REGISTRATION?

An outside opinion on the fundamental point at issue

From the March number of the Bulletin of the American Association of University Professors we reprint the following very pertinent remarks on the whole subject by Joseph A. Leighton of Ohio State University, delivered at the inauguration of the President of Michigan University.

. But it is still more disheartening and still more lames efficiency when the competent professor sees, and is powerless to prevent, the dilution and cheapening of the educational work of the institution through its succumbing to the ever imminent and insistent pressure to spread out its work over more and more ill-prepared and unpurposeful students, and to see the institution rush hastily, without adequate equipment and personnel, into new educational enterprises.

One of the curses of higher education in this country today is the apparent worship by the public, alumni, governing boards and administrators, yes, and tell it not in Gath, publish it not in Gilead, the worship, even by professors, of the golden calf of quantity production. The most serious menace to the maintenance or improvement of the qualitative standards of higher education today comes from the ever-rising flood of freshmen. Faculties seem to be powerless in the face of this menace. The situation is especially alarming in the state universities. Legislatures, being without knowledge, do not appreciate the situation; the governing boards face it only intermittently, namely in trying to find the money for new instructors; the faculties are face-to-face with it every day; privately they groan over it, publicly they are passive and silent; theirs not to reason why, theirs but to teach and die. The numbers roll up, the courses multiply by fission, like the lower organisms; universities rush to get cheap and inexperienced teachers who sometimes are not even worth the pittance they are paid, to turn out ever growing hordes of graduates who have amassed the correct number of credit slips, but who have no clear idea of scholarly or scientific method, no real insight into the meaning of education, no exacting standards of thought and taste.

The in-rush of hordes of unselected and badly prepared students has its touching aspect. It is in part at least an expression of the yearning of our democracy for spiritual development and of a blind faith in the mystic power of education to transmute the soul of youth by some alchemy or magic into nobler and worthier life. But we do disservice to democracy when we fail to exercise rigorously the process of selection by which only those qualified by nature and nurture are chosen to be the responsive subjects of university education.

We must get rid of that democratic form of sentimentality which

ignores the inexorable fact that in every generation, by the operation of the blind forces of nature or by the will of God (call it what you will, it matters not), only a small minority of the youth have the native capacity for acquiring the highest degree of education. To dissipate our energies and our resources in the universities in catering to every comer is to do injustice to the more gifted, and in the long run to our democracy. For we fail to train up leaders, and we foster the illusion on the part of the many that they are getting a higher education.

FISHERIES SCHOOL AT M. I. T. ?

Institute authorities considering project

FOLLOWING the investigations made by Prof. S. C. Prescott, instructor in industrial biology of the department of biology and public health of the Institute of Technology, who has returned from Seattle, where he studied the work of the College of Fisheries of the University of Washington, it has been announced that the administrative committee of the Institute is considering the inclusion of a course in the scientific problems of fish culture and the attendant problems of the big fisheries of the country.

The University of Washington is the first of the higher educational institutions in America to maintain a college of fisheries and the recent investigation was made for Gardner Poole, Boston head of the fisheries division of the Food Administration, and J. C. Wheeler, of the Bay State Fisheries, in the interests of the fishing industries of the Atlantic coast, who wish to start a similar course here. Plans for the project, should the Technology authorities accept the proposition, include the erection of buildings to house a hatchery and a cannery, besides space for a museum and library, and special research work. The proposed course would afford instruction in two well-recognized branches of fish culture, the problems of hatching and the operation of the fishery, to be supplemented by co-operative courses maintained in conjunction with the large fishing industries of the Atlantic coast.

LAUNCH NEW CHEMICAL ENGINEERING COURSE

Benefits of practice stations extended to undergraduates — is open to Course X Juniors by competition — will graduate with class

A COURSE in Chemical Engineering Practice for undergraduates, similar to that now offered to graduates in Course X-A, is being offered by the Chemical Engineering Department. This course is open to those who have done the work of the first three years, and is so arranged that the men may graduate with their class.

The principle upon which the work is founded in both the graduate and undergraduate schools of Chemical Engineering Practice is that a certain amount of training is a necessary prerequisite to obtaining the educational benefit from the actual practice school. With this in mind the first course was available only to those holding a Bachelor's degree. These men spent six months in the practice school, and then after two terms of elective work at the Institute, obtained the Master's degree.

Course X-B will allow undergraduates of unusual ability the advantages of the practice school. It is planned that they will attend the summer school following the junior year, during the last five weeks of which special subjects in the Department of Chemical Engineering will be offered. They will then spend the next term at the Institute, going to the practice school stations for the last two terms of the senior year, and return to the Institute to graduate with their class. If, because of attending the practice school, the men are unable to complete all of the required work at the Institute, this work may be done in the summer school following the senior year, and the diploma received as of June of that year.

The admission to the course is competitive. The one hundred and eighty members of the present junior class are eligible to enter the course next year. The men will be chosen on the basis of scholarship and personality, but not more than thirty-six men will be admitted. This will make three groups of twelve men each.

The underlying principle in making this course open only to men who have completed the work of the third year is that real educational benefit can be secured only by men who have had a certain amount of training in the fundamentals for a background. The course has been made non-remunerative, so that the men may at no time have to do work at the plants of lesser educational value in order to make a return to the company, or be held at any one division of the work after it has ceased to hold an educational value for them. The men are at all times under close supervision of an Institute professor, there being one professor to every ten men, and each professor is assisted by an instructor, these

being at the stations organized for Course X-A. Furthermore, the men are stationed at seven plants of different types, so as to give them an insight into the work of the different divisions of the field.

In order that a number of different fields may be covered, three practice stations are maintained. At each station is an Institute professor and instructor. The station at Bangor, Me., is located in two paper manufacturing plants. At the Everett, Mass., station, the time is divided between the Merrimac Chemical Company, the Revere Sugar Refinery, and the Boston Rubber Shoe Company.

In the School of Engineering Practice, the student designs, plans, and carries out in its entirety, the work of making tests. He decides as to the data needed, how it should be obtained, the methods used in calculating the results and what results are needed in order to make a sound engineering decision. The students and the faculty staff at the plants function as engineering consultants for the companies, carrying out full scale tests. The broad scope of the work is indicated by the different lines of manufacture involved — caustic soda and chlorine by electrolysis, pulp and paper, sugar, heavy chemicals, rubber, soap, gas and coke, iron and steel, and by-product recovery.

NOTES OF THE ARCHITECTURAL DEPARTMENT

Two of the paintings which were exhibited in the recent showing of loaned water colors at the Rogers Building have been presented to the Tech architectural department. The paintings are by F. A. Breed and Fred R. Witton.

Another gift to the department which has been announced by its head, Prof. William Emerson, are sets of designs which were submitted to the State of Nebraska for the new Nebraska State Capitol. The designs which were given to Tech include those of the winner, B. G. Goodhue, and those of Borae Zensinger, Mandary Paul and P. Crat. They are now on exhibition in the Rogers Building and were loaned to the Boston Society of Architects for its exhibition.

The College of William and Mary of Roanoke, Va., has asked the Tech Architectural Department for plans for beautifying the college campus. The college is now having an endowment fund drive which will pay for the work.

Professor Emerson will award this year to students in the architectural department who win the annual money prizes for the best designs and work in other branches during the years, medals, which will be designed by W. T. Aldrich, '01. Professor Emerson is paying for the medals himself.

TECHNOLOGY SUPPLIES SWARTHMORE'S PRESIDENT

Aydelotte of the English department chosen

FRANK AYDELLOTTE, professor of English in the Massachusetts Institute of Technology has been elected president of Swarthmore College by the Board of Managers of the college in succession to President Joseph Swain, who resigned last October on account of ill health. Professor Aydelotte was born in Sullivan, Ind., in 1880, prepared for college at the Sullivan High School, took his A.B. degree at Indiana University in 1900 and his A.M. at Harvard in 1903. In 1905 he entered the University of Oxford as a Rhodes scholar from the State of Indiana and received the research degree of Bachelor of Letters in 1908. He was married to Marie Jeannette Osgood, of Cambridge, Mass., in 1907.

Before going to Oxford, Professor Aydelotte had been instructor in English at Indiana University, assistant in English at Harvard and instructor in the Boys' High School at Louisville. After his return from England he was assistant professor of English at Indiana University from 1908 to 1915 and since has been professor of English at the Massachusetts Institute of Technology. During the war he was national director of the war issues course in the Committee on Education and Special Training of the War Department. He has acted as American secretary to the Rhodes scholarship trustees since 1918. He is a member of Phi Beta Kappa and of the Sigma Nu fraternity.

Professor Aydelotte is the author of several books and articles on Elizabethan literature and social history, on English and American educational methods and on the teaching of English literature and composition. He was for seven years the editor of the *American Oronian*, a quarterly magazine published by the Alumni Association of American Rhodes Scholars, and has been influential in bringing about the present increased interest in the scholarships throughout the United States.

In his various books and articles Professor Aydelotte has advocated the teaching of English literature and composition primarily from the point of view of thought rather than of form, and of so altering the undergraduate curriculum and examination system of American institutions as to emphasize the thorough training of the best students instead of being content with the attempt to bring the whole student body of an institution up to a lower average. He believes in college athletics and has had long experience as an athlete, both in this country and in England. He played end on the football team of Indiana University and was chosen by experts as a member of several all-State football teams.

Professor Aydelotte is president of the New England Association of Teachers of English, chairman of Committee G of the American

Association of University Professors, which is studying means of cultivating the intellectual interests of undergraduates, and chairman of a new-organized committee of the Modern Language Association for making reproductions of early English manuscripts for the use of American scholars. He is a member of the council of the Society for the Promotion of Engineering Education, and has been prominently identified for the last half dozen years with the movement toward the liberalizing of technical training in this country.

STRAWS SHOW THE WIND

CULTURAL subjects will play a greater part than ever before in the instruction at Brooklyn Polytechnic Institute as the result of the adoption by the faculty of the final report of its committee on educational policy. This recommends the reduction of the total number of hours in such subjects as chemistry and civil engineering and a proportional increase in subjects such as English history and economics. The change, which is to go into effect with the opening of the next fall session, is made in order to "develop professional men of broad fundamental training."

The committee found that "lack of proper balance in the number of actual and weighted hours is one of the chief faults of the present curriculum, which has been corrected in the proposed revision." This revision makes definite reductions in the total hours in technical subjects as follows: Chemistry, 8.2 per cent; chemical engineering, 14.1 per cent; civil engineering, 5.6 per cent; electrical engineering, .4 per cent; mechanical engineering, 4.2 per cent. The average number of hours in these subjects between 27 and 30 per semester, still remains as large as that in other foremost engineering schools in the country. Partly to balance the reduction, the increase is made in time spent on English, modern languages, history, economics and optional subjects. In percentage figures, cultural subjects have been increased from 12.9 to 14.7 per cent of the curriculum for the four years. This still leaves about a third of the curriculum devoted to scientific subjects and about a half to engineering subjects.

THE FEBRUARY AND MARCH COUNCIL MEETINGS

THE eighty-second meeting of the Alumni Council was held on Monday, February 28, 1921, in the Walker Memorial, Cambridge, Mass.

The usual informal dinner was served at 6.30 P.M. with an attendance of fifty-two. The meeting was called to order by President Metcalf, '92, with an attendance of fifty-eight. The general subject scheduled for discussion was the present registration and the advisability of limiting it.

The records of the last meeting were read and approved. The announcement was made of the report of the Nominating Committee for officers and nominations of Term Members for the coming year. (See special article in this issue.) New members of the Council elected by the Executive Committee were announced: F. W. Hodgdon, '76, for the class of '76, H. P. Claussen, '16, for the class of '16.

President Metcalf made a report of progress of the Intercollegiate Conference to be held at the Institute in April. He also made a report on the success of the Hoover Dinner given by the Students, at which \$2200 was raised for the starving children of Europe.

Mr. J. W. Rollins, chairman of the War Memorial Committee made report as follows:

The committee, Mr. Rollins said, had been so widely scattered that it had had few meetings and that the report, therefore, was made up by the members near Boston and concurred in by others. The report, as he went on to explain, was only a suggestion which might or might not be followed. The War Memorial, the committee felt, should have both an ideal and a utilitarian character. It should consist of some sort of monument now, and perhaps some buildings later when the money for them was available. It was suggested that a monument be erected in Eastman Court with suitable landscape gardening. There might be, also, permanent memorial tablets in the lobby to go with the proposed busts of the presidents Rogers, Walker and MacLaurin.

In the discussion which followed, Mr. M. L. Emerson, '04, raised the question of whether a chapel might not be the most suitable form of memorial. There was, in his opinion, a great need for some building or assembly hall in which services might be held, such as were common in other colleges but which Technology had always unfortunately lacked. He further suggested that the committee be not discharged, but that they take up the question of the ways and means of constructing a memorial. Their report suggested that some other form might be approved.

Voted: That the committee be not discharged, and that they be given authority to make further report on ways and means of constructing a memorial.

Voted: That the president appoint a special Nominating Committee of three to report to the Council nominations for the Advisory Council on Undergraduate Activities.

President Metcalf referred to the report of the Athletic Council which has been circulated among members of the Council. No action was taken at this meeting.

Mr. Hunter spoke on the report made by the secretary of previous action taken upon the matter of departmental committees.

Voted upon a motion of Mr. Hunter, that the Chair appoint a special committee of three to investigate the advisability of establishing a system of advisory committees of the Alumni Association; these committees to report to the Alumni Council suggestions for changes or improvements in the various courses or departments of the Institute. This special committee, shall, if it finds the appointment of such an advisory committee advisable, present in its report a program for the organization of such advisory committees and outline the scope and methods for their work.

President Metcalf next introduced the principal topic of discussion for the evening, the limitation of numbers at Technology. He introduced Prof. E. B. Wilson, a member of the Administrative Committee, who made an interesting and lengthy report of a statistical nature on the question of whether the present plant needed expansion. There was, Professor Wilson felt, no need to be alarmed by sudden changes. A university was a long-time business, and therefore no sudden expansion to meet sudden needs was desirable. Best look ahead fifty years. Nevertheless, it was time to take stock of the Technology tradition.

Technology has definitely passed the stage of a small institution. It is large and will remain large; the only question is, how large. The present plant was built for 2,000 but it is accommodating 3,500 very comfortably. The overcrowding is serious in a few spots but not alarming, and it is difficult to say exactly how much farther we can go with the present equipment. With a 75 per cent increase in students, there had been a 48 per cent increase in room load, and it is possible, by changing the present ratios of morning and afternoon classes, to increase the room load 66 per cent all told, which would take care of 5,000 students in the recitation rooms.

There was of course more difficulty in some shops and laboratories, but by spreading the work over the year, particularly if we decided on a four term year, and by beginning courses twice or four times a year, that could be arranged for. It was always possible to increase the number of hours in the day when the laboratories were used, using them instead of from 9 A.M. to 5 P.M., from 8 to 6, as at Sheffield. It might even be possible to use the laboratories from 7 to 9 in the morning and from 7 to 9 in the evening. Arrangements such as these would easily take care of 6,500 students. Even at present there are unused rooms in the Institute which could be utilized for laboratories, thus obviating need for extension of the plant.

As to the more advanced work, the limit of accommodations for

seniors, estimated before moving in by the heads of departments, as around 800, has not yet been reached. The load, therefore, on the more expensive part of the plant was still far from heavy, indeed it would not be reached normally under a registration of 4500. Such a registration, however, would call for one thing never as yet properly seen to, the proper distribution of students among the various courses, to avoid overcrowding some courses and leaving others nowhere near working at capacity.

There is no call, Professor Wilson believed, to consider a large school less efficient than a small one. The plans for Technology, when completed, would take care of 10,000 or 12,000 students, and it must be remembered that one of the largest universities in existence, the University of Paris, was also one of the highest in scholarly standing.

Furthermore, registration, as seen from a chart hanging in the room and prepared by the Registrar's office, tends to follow well defined laws, namely that a maximum seems usually to be followed by a falling off. The acceleration in Technology's registrations after 1880 flattened off during the 1890's because of hard times. The peak in 1902-3 was followed by a slump for ten years before it reached the same figures again. During the war, of course, our registration fell off and then increased enormously, one half of which growth was perhaps normal. The normal, today, would be about 3,000, but the extra numbers come from one unusually large class, now Juniors, which will pass out as seniors in 1922. There is little likelihood we shall very soon have another class as large, and if economic conditions remain uncertain or threatening the numbers either now attending or entering later may actually fall off. At Yale the student body has fallen off from 10 to 15 per cent.

At Yale, moreover, the university is embarrassed by a large number of permanent appointments at high salaries, which cannot be cut down when the registration decreases. Everywhere there are evidences in other colleges that the younger men are being laid off, promotions to permanent grades are not being given as freely as formerly, and the remaining members of the staff are having to work longer hours and take care of larger numbers of students. This, Professor Wilson thought, would be probably the safest and most reasonable course for Technology to follow.

One thing, however, we might do. Formerly Technology's tuition fee was at least a hundred dollars greater than that of other universities; we recently increased ours to \$300, but at present most colleges have caught up to us, so that Technology is giving a much more expensive form of education for fees no larger than those charged by schools which have no great laboratories and machine shops to maintain. We might very well increase our tuition again in order to keep to the old ratio. This relative fee in the case of Technology should be about \$500.

Professor Wilson's very full account of our physical conditions was followed very attentively by the members present and was taken

up from one point of view or another by several other members of the faculty, heads of courses, who were present and invited to speak.

Professor D. C. Jackson, of Course VI, who was next called upon, analyzed our growth as a permanent thing, not temporary, produced by the great advertising, due to the many soldiers and men of the navy who had been sent here to the special schools, and also to the results of the war, because of its having been generally recognized as a problem of engineering. He emphasized the point that it is necessary not to reduce the teaching standards, and that we should be prepared to take whatever numbers come to the Institute. He referred unfavorably to the practice at the Institute, which he had always noticed, that we were lax in admitting unprepared men and that we admitted students from other colleges without the necessary scholastic standing.

President Metcalf next introduced Professor Dewey, who spoke of the question from the point of view of the standards of instruction, as well as of the use of the Institute buildings to their maximum capacity. He criticized the present method of selecting students and of their elimination after entrance, presenting an example to suggest that the entrance examinations were not a complete means of determining whether or not a student was prepared for the Institute work. Out of a certain number of them who were required to withdraw, he found a large number of them had had clear records, and of those who were advised to withdraw a large number of them also had clear records. These also were analyzed by years. Professor Dewey suggested, therefore, that some way of determining the ability of the students might be obtained through some intelligence test and that it might be wise for the Institute to have on its staff an industrial psychologist. There might be sub-deans also, who might quietly scrutinize the students without publicity. Professor Dewey recalled the traditional ratio, now lost, between members of the instructing staff and members of the student body. Formerly the ratio was one to six, but now, at the present, as during last year, it is only one instructor to ten students. The present staff should be nearly 400, if our standards were not to suffer.

President Metcalf next called upon Professor Tyler, who said that he believed, according to the Executive Committee, that we are now in a condition to accommodate 4000 students. A president of a big southwestern college, when he was told that our new buildings were planned for 2000, stated that *he* would accommodate 4000 in such buildings. Professor Tyler believed that increase, when too rapid, was unhealthy, and he had hoped that we might restrain the numbers to 2000. Now that we have passed it however, he recognized the need for an increase. Although our entrance requirements had been raised by the addition of trigonometry and chemistry, he hoped that the first-year class would not be smaller. There is more danger, he believed, in admitting too many upper classmen from other colleges. As to the load upon the endowment, the question is raised as to whether or not the Institute can determine how great a load the present endowment can stand in the way of numbers of students. It is due our self-respect to determine how

many students we should admit, and we should not admit students just because they knock at the door. Avoid a *laissez-faire* attitude — and watch the gate. Professor Tyler referred to another part of the problem, namely, the kind of provision we had for living accommodations of students, whether or not more means should be provided for housing them, so that numbers need not live under the present conditions in unsatisfactory rooms.

Professor Spofford was next called upon by President Metcalf. He discussed the problem from the point of view of the character of the teaching staff, the standards of scholarship, and the financial problem. In his opinion more instructors and of different types should be used, because of the numerous problems that were coming to the Institute. For instance, in his own department, problems upon the harbor and river works were being referred to the Institute by the War Department. The problem of the development of highways was another on which the Institute could well assist, if it had the staff. Professor Spofford referred also to the growing inability of the instructors to keep in personal touch with the larger number of students during the winter work, but, he suggested, the summer camp provided excellent means of having students come in contact with one another. The standards of scholarship must be retained, but in considering whether or not we should have higher entrance examinations, we must not forget that we are a semi-public institution, and had probably gone in that direction as far as we could without arousing public antagonism. Professor Spofford raised a new question, as to whether our overhead was not greater than necessary and whether by increasing the number of students it could be reduced in percentage. In conclusion, he said that we should not be afraid to increase the attendance, and that we should make an attempt to get more students, rather than fewer.

Professor Pearson, who was next called upon, emphasized particularly the need for economy of effort and the possibility of analyzing the students as to their intellectual capacity or aptitude for engineering work. He referred to the success of the students who divided their work between the Institute and the General Electric Works during term periods, and suggested that a way should be found of dividing our heavy work so that there should not be so great an individual load. He further referred to the effort that Professor Dillon is making in segregating the alert from the other students, in the hope that the device might be used generally throughout the school.

The discussion was then thrown open to the members of the Council, and though the hour was late, several members spoke. Mr. Aiken spoke favorably of the ideals of the present engineering school at Harvard in comparison with our own apparent tendencies, and insisted that Technology ought to go in for quality rather than quantity. Our present student body seemed to him, he said, like schoolboys, very immature, and he felt there might be some interesting information gained by analyzing the ages of those who fail to complete the Institute course. As to our present discussion as to increasing the endowment and tuition

and plant and staff, it seemed to him like the case of the farmer who was always planning to buy land to raise corn to feed pigs, in order to sell the pigs to buy some more land to raise some more corn to feed some more pigs — in other words, we were not formulating any definite ideal of what our education should mean to our students.

Mr. Hopkins brought to the Council the conclusions of a group of the alumni in New Haven; he said that he and other employers believed that the quality of the Tech graduate was not what it had been in former years and that somehow the instruction seemed to be suffering.

Mr. Rowe suggested a statistical study of whether men dropped from the school turned out to be successes later. In answer to this Professor Spofford said that, to the best of his memory, the Faculty had once investigated that point and found that on the whole, by and large, the greater portion of those dropped from the school had *not* been markedly successful later.

It was also suggested by Mr. Hinckley that if men came to Technology too young to get full benefit from the course, it might not be a bad idea to require students to take a year's practical work in some plant before entering.

As it was now after ten o'clock and the discussion showed no signs of slackening, it was moved by Mr. M. L. Emerson that the discussion be continued at the next meeting of the Council, particularly from the point of view of the welfare of the student as well as from that of the efficiency of his education. And the meeting adjourned.

THE MARCH MEETING OF THE COUNCIL

The eighty-third meeting of the Alumni Council was held on Monday, March 28, 1921, in the new Common Room in the Architectural Department of the Institute at the Rogers Building, 491 Boylston Street, Boston.

The usual informal dinner was served at 6.30 P.M. at the University Club, 270 Beacon Street, Boston, with an attendance of thirty-nine.

The meeting was called to order at eight o'clock by President Metcalf, '92, with an attendance of sixty. The records of the last meeting were read and approved. The president called upon Professor Emerson, head of the Department of Architecture, who was host of the Council, who welcomed them to the new meeting room of the architectural students — a room, by the way, made possible only through the effort and generosity of Professor Emerson himself.

President Metcalf read to the Council communications which had been received from the New Haven Technology Club, from the Philadelphia Technology Club, and from Mr. E. H. Davis, a member of the New Haven Club, all concerning the question of the limitation of numbers at Technology.

President Metcalf next called upon Dean Burton who spoke on the question. The standard of scholarship was not to be lowered, he said, but living conditions were greatly to be considered. It would be a good idea to weed out the students in the first year class, but too

great restrictions of entrance examinations might often exclude those who were best for the Institute work. It is his idea to take men with one or even two entrance conditions, if for instance, the two were in modern languages. Engineering students have difficulty in acquiring modern languages; some have an antipathy against such subjects, and more men are likely to fail in these subjects, because of their poor training in the languages at the preparatory schools. It obviously would be wise not to admit to the Institute those who have serious failures in mathematics. After selecting the men by entrance examinations and admitting those who are well prepared in mathematics, it would be well, after five weeks of the term, to submit these students to certain intelligence tests, such as have been described by Mr. Shaw of Tufts College, which would show whether or not those who take the examinations are competent to continue as engineering students. These examinations are not such as can be prepared for by special tutoring. They are not based upon results of memory. The results of these examinations, with the regular quizzes and tests at the end of the first ten weeks or the first term of the school year, should settle the student's status. In the present year about 120 had been dropped after the first term. It would be practicable to drop more at the opening of the term, on account of the failure of candidates to fulfil certain entrance requirements, provided entrance examinations were held again in December, when these students and other new students might present themselves for entrance examinations, and if successful in passing them, be admitted to a new class to be started in January. Some students are able to pass entrance examinations, however, who cannot get beyond the second year of the Institute. Another important factor in the consideration of the limitation of numbers was the quality of the teachers. Departments should know how their men are teaching.

Another phase of the question of limitation of numbers is the overcrowding of students in homes or dormitories, a question which is most important to parents. At present the Institute does not give decent accommodations for eating and living. It is true that a list of names and addresses for two thousand students has been collected, but even some of these places are not what they should be. The question of food is also a serious one. The Institute now gives an unusually good lunch at a reasonable figure, but does not provide breakfast and dinner for the students as the parents might expect. The dormitories accommodate but 175 men with a waiting list of 300 or 400, and the rooms are booked for from three to four years. It is our duty to do something about this, in order that we can assure the parents of some interest in having the students live under fairly good conditions. Indeed, some of the parents and some of the alumni of the Institute are likely to send their sons to another college, although they usually have to give two extra years to their collegiate training.

Frequently, moreover, those who come to us from other colleges get too much credit for the work which they may assume that they have had. It would be better for the men who come to us from other

colleges to repeat the essential subjects. Some parents, who are afraid to have their sons submitted to the entrance examinations, have them go to another college that admits on the basis of certificate, merely to avoid the difficulty of entrance examinations. We should be more careful, therefore, about the admission of students from other colleges, and we should announce that students who enter the Institute from other colleges must expect to lose at least one year.

But the greatest problem on hand at this moment is to provide housing for more students. The scholarship standing of the Institute is well protected, but as for living for students we have a hard problem.

Professor Allen next spoke to the Council. He referred to his having been a member of the faculty for a long time with Dean Burton, and while they were always good friends, they were not always of the same belief on problems; but he was glad to assure the Council that he was in substantial agreement with Professor Burton. Professor Allen told the Council that he had recently, out of interest in this subject, reviewed the records of a class at the Institute about twenty-five years ago, and found that in estimating the records on a scale of five, that those whose records were three might properly be shut off at entrance. Out of seventy-eight records which he examined, he believed that sixteen *should* have been shut off and twelve more *could* have rightly been shut off in their first or second year. Had this been done then there would have been no need of disciplinary votes for students after their second year. He had looked at a more recent class, he said, and he seemed to think that the regulations concerning the entrance examinations were a little better carried out, and that they were now perhaps a better measure of the students' ability. He referred to the opinion which General Walker held when president, that the entrance examinations should be reasonably easy and should be acted upon rather tolerantly in order to admit to the Institute students who had not had the best opportunity to prepare for Technology work. Now, however, General Walker's point of view would be different, for conditions now are widely different. Professor Allen held that we should demand of students both good capacity and good preparation. We should take only such men. Those of poor preparation were a drag upon the Institute from the start and should be shut out. The number of the first year class should be fixed according to the number who appear with the proper preparation and ability, and then, by taking care of the first and second year classes, the danger of overcrowding would be overcome.

Professor Allen next reviewed the question of the limitation of numbers from the financial point of view, and stated that he had been looking over some of the Treasurer's Reports and found that the increase in number of students was a disadvantage. It seemed to him that an increase in number of students was a very large financial burden, and that the important problem is to get more money and more dormitories so that we can take care of the students that we have. He referred to a student who had lost one-third of a year because there were no

facilities for research work. He understood from the head of the Physics Department that members of this staff had been unable to carry on Research, which they had been promised they would be permitted to do, on account of lack of facilities. There is no danger of the Institute dropping its standard of teaching, Professor Allen believed, but to preserve it we should limit the number to students that can be taken care of.

Colonel Dewey next addressed the Council and referred to the fact that the students who come from other colleges had been spoken of this evening and on previous evenings, and he challenged the statement that a man from another college could not become a good Tech man. There were loyal members on the Council who had come to the Institute from other colleges. He thought it so important to take care of the physical needs of the students, that, had he a son about to enter college, he doubted if he would let him go to Technology for the first two years. At that age a boy would hardly be mature enough to meet the competition which must exist according to the suggestions made regarding the first two years. It would be better for a parent to send his son to another college until he were older and let him enter the Institute only for the last two years.

The discussion was closed by Mr. Hopkins who stated that we should bear in mind the quality of students that we are to turn out, and that there should be an increase in the number of teachers that are to be provided. Many manufacturers who have been endeavoring recently to produce quantity and had overlooked quality are now suffering from these conditions. The Institute itself would undoubtedly take care of the problem of training its own teachers. The number of teachers should be increased in order that the size of the sections might be reduced and that the teachers might come in more personal touch with the students.

The next topic on the call for the meeting was taken up and Professor Pearson was called upon to speak to the Council on Student Activities. He produced two bound volumes which are made up of the Report, with appendices, made by students in a course in report writing under the supervision of a member of the English Staff, Mr. Prescott. After Professor Pearson spoke, Mr. Prescott was called upon to outline in detail the work of this course. He asked that all alumni who were interested would send to the Institute copies of reports made by them in numbers as large as possible in order that each student in his work might have before him examples of formal reports.

Mr. Smithwick, president of the Senior Class and President of the Student Institute Committee was then called upon to make a report of progress upon the Student Intercollegiate Conference, of which a full account will be found elsewhere in this issue.

The next topic of the business was taken up which was the report of the Advisory Council on Athletics. Dr. Rowe asked that a plan be devised whereby the Athletic Council might be able to expect an annual appropriation of not less than \$3000 from the Alumni Association, and

he suggested that each class contribute \$50. He told how eighteen teams at the Institute had been maintained at an expense of from \$6000 to \$9000, whereas at Harvard thirty-six teams had been maintained at an expense of \$165,000. The Technology Track Record for the past year has been very good, and there have been a number of other successful teams with enviable reputation. The budget made from the student tax for the current year has been exhausted and there is no money available to carry the teams for the rest of the year.

The last speaker, Professor Miller, referred, because of the question which had been raised regarding laboratory capacities, to the engineering laboratories which were designed for 4000 students. There are now from 1800 to 2000 students there per week and the number could be doubled if sufficient teaching staff were provided. The machine tool work laboratory has been increased in capacity one hundred per cent, and the laboratories are large enough now to provide for an increase for five or six years. On account of the interchange of laboratories, the Foundry has been increased 100 per cent, 72 men work at a bench and all the 72 men can take part in a pouring. The Pattern Shop also is all right but the Forge Shop is smaller, on account of the fact that a fewer number of the departments are taking up work in Forging.

Professor Miller's speech closed the evening's discussion and the Council adjourned.

OPINIONS WELCOMED ON THE WAR MEMORIAL

IN the report of the February Council meeting will be found mention of the recommendations of the committee appointed to consider a proper memorial for Technology men in the war. As no immediate action seems possible, members of the alumni are invited to send in their opinions. A most interesting suggestion is that, instead of a building, there should be a scholarship endowed and named for each man on the honor roll. Other suggestions are in order.

PROFESSOR HOVGAARD'S BOOKS

IN the Book Review department will be found two full and authoritative reviews, one by Professor Jack of the Institute, on Professor Hovgaard's two books on the history and on the design of warships, two volumes of the greatest importance which have not as yet, because of the war, been given general adequate notice in this country.

ACTIVITIES OF THE WOMEN'S ASSOCIATION

At the March 4 meeting of the Technology Women's Association, held as usual in the Emma Rogers Room, Administration Building, Cambridge, amendments recommended by a committee consisting of Miss Howe, Miss Joslin and Mrs. Sawyer, *ex officio*, who had in charge the revision of the by-laws previous to a reprint, were acted upon and adopted.

The large celluloid buttons, adopted at a previous meeting as a means of identification of members, were worn at this meeting after having been lettered by one of the architectural coeds present.

Following the short business meeting Mrs. Osborne, resident director of the Students' Union, gave a delightful account of the object, work and aims of this Union. So much interest was shown by the Association members present, that Mrs. Osborne extended an invitation to have afternoon tea with her at the Clubhouse, 81-83 St. Stephens Street, in order to see at first hand the condition and needs of the student quarter of Boston and how these needs are met for the group of over five hundred young women living under the direction and guidance of the Union.

April 8 was later set as the date for the tea.

Miss Fisher, second vice-president of the Association, was appointed delegate to the biennial convention of the National Association of Collegiate Alumnae, in place of Mrs. Sawyer, who was unable to attend. At this convention to be held in Washington many important matters relating to the Clubhouse and its field of usefulness are to be considered.

Making the National Clubhouse on Lafayette Square, opposite the White House, the center for educational work of the Collegiate Association in both its national and international aspects is one of the matters to receive attention.

In answer to a post card appeal for subscriptions, however small, to the Madame Curie Radium Fund, over sixty dollars was received within a few days from some of the Tech Association members. Full returns are not yet in.

Owing to the desire of many of the members to have the spring luncheon in Boston proper for a change, the luncheon committee consisting of Mrs. Tyler, Dr. Bryant and Mrs. Sawyer, *ex officio*, made arrangements to hold the luncheon at the College Club, 40 Commonwealth Avenue, on Thursday, April 21, at one o'clock. Further plans are not yet complete.

UNDERGRADUATE ACTIVITIES

DAVID KAUFMAN, '23

ALTHOUGH, according to Dr. Rowe, Technology is unable to put out a big collegiate team on the gridiron because of the pressure of studies and the lack of funds, nevertheless, the undergraduates are raising their Alma Mater to a prominent position in the intercollegiate sporting world. They are waking up to the importance of sports and this year the banners of Technology have invaded every large college of the East. Technology's ability to produce winning teams is now becoming as famous as her ability to put out high-grade engineers, and the undergraduates are now doing all in their power to boost the Cardinal and Gray.

The second term bristled with almost daily games, and hardly a day passed without new glories and new stars. Looking back on the activities of the past term, it is hard to distinguish which team drew the most attention. Hockey and basket-ball together with indoor track took the lead in Institute sports. After a relapse of ten years, basket-ball suddenly awoke, starting with eighty-five former shooters. Hockey christened the new Boston Arena in a clash with the champion of the north. Both teams covered themselves with glory and both fixed a definite place for themselves on the sporting map of Technology. The track team swamped its up-street rivals more than once, besides emerging as New England champion in the intercollegiate races. Our prowess was exemplified particularly by the athletic carnival held during the week end of February 21, when seven games were staged at the same time.

Tech Show 1921, starting with a monster smoker on November 17, wound up with a grand success on March 19. "The Purple Dragon," the title of this year's show, was given for the first time Thursday afternoon, March 17, at the Academy of Music, Northampton, repeated there in the evening, and was then brought to Boston, where it was produced at the Boston Opera House on Friday and Saturday evenings, with a matinee on Saturday afternoon. "The Purple Dragon" is the work of Malcolm Johnson, '22, assisted by Frank Gage, '22, Amos Stevens, '22, J. H. Randall, '21, A. H. Fischer, '22, W. C. Groce, '23, H. W. Reinhard, '21, J. J. Murphy, '22, and L. F. Jenness, '23, music and lyric writers. The scenery and costumes were under the direction of C. Carver, '21, G. R. Wiren, '22 and Miss Cornelia Nelson, '21. G. R. Wiren, '22, a Russian student at the Institute, painted the poster and program cover, while M. F. Farren, '21, designed the score cover. The production was under the direction of C. H. Hillman, cast coach, Miss Lillian Dennis, chorus coach, Miss Virginia Tanner, ballet coach and William Howard, orchestra coach.

The "Purple Dragon" is a musical comedy in two acts. The plot

deals with the adventures of Reggie Marston, who is left a fortune on the condition that he live for one year on a farm in Vermont. Country life is too tiresome for him and he seeks the "gay white way" of New York. There he has a terrible time dodging an Institute professor, who is executor of the will. The professor has his troubles in avoiding his wife, who does not approve of New York in general. A Bohemienne, the proprietor of the "Purple Dragon Inn" in Greenwich Village invites Reggie to a masquerade ball, to which the professor is also persuaded to come, although unknown to Reggie. The complications in mistaken identity are humorously unravelled and eventually everything comes out well. The ballet was an artistic production set in a robbers' cave in the fastness of Slavia.

CAST

Sir Frederick Cholmondeley, of Old New England	E. W. Booth, '21
Sylvia Vernon, Reporter on "Town Topics".....	J. P. Keegan, '22
The Mysterious Menace.....	H. R. Harris, '23
Pilbeam, Mavis' Butler.....	G. Schwartz, '24
Lucille Hendry, of Antwerp Roof.....	Parke D. Appel, '22
Reginald Marston, The Professor's Ward.....	W. C. Groce, '23
The Professor of our Institute.....	W. S. Anderson, '23
Mavis, the Bohemienne.....	J. W. Church, '22
Susan, the Professor's Wife.....	H. A. Bull, '22
Gerald Vernon, Sylvia's Brother.....	H. L. Walker, '24
Jaynes, Mavis' Ex-Husband.....	E. H. Schmitz, '23

The Northampton performance was the greatest triumph in years. The demand for tickets by Smith girls literally swamped the show office. To satisfy Smith, the Tech Show departed from its usual custom and staged two performances at Northampton. The biggest hit of the evening performance was made by W. S. Groce. He sang his "Wonderful Lines" eleven times and still Smith roared. Twenty-nine hundred filled the Opera House on the first night of the Boston performance. The applauding audiences greeted "The Purple Dragon" as the finest production in the history of Tech Shows.

Junior week commenced with the firing of the first paddle for the start of the Annual Technique Rush on Thursday morning, March 17. W. W. Quarles, Jr., '22 won the first paddle. The reception and tea dance in the afternoon given by the Institute drew five hundred couples to Walker. The Musical Clubs established a precedent by holding the spring concert in Walker. The whole building was reserved for the affair on Thursday evening. "The biggest dance ever held in Walker!" said the crowds that departed at 3 o'clock in the morning. Two large ballrooms at the Copley Plaza and a separate tea-room were engaged to hold the five hundred couples who attended the Junior Promenade. 1922 Junior Prom was unique. It started at 11.30 after the Tech Show performance and continued until 6 A.M., interrupted at 3.30 for refreshments and for the sale of the sunrise special of THE TECH. Reisman's "dreamy jazz" contributed greatly towards its success.

The cross-country teams started the season by swamping Harvard on October 30. Both varsity and freshmen barriers sent the crimson "hill and dalers" sprawling in the dust. Captain Billy MacMahon, Elmer Sanborn and A. Flanders were the first three to finish in the varsity race, while Spurdle was nosed out by Harvard for first position in the freshman race. Superior team work gave the barriers a lead of one point over Dartmouth. In the annual fall five-mile handicap both Sanborn and MacMahon won coveted trophies. The cross-country men covered their Alma Mater with glory when they again won the New England championships at Franklin Park, November 13. Bates College trailed with eight-one points, followed by the rest of the New England aggregations. Although flushed with victory in the N. E. I. C. meets, the runners placed third in the twelfth Annual I. C. A. A. A. championships at New Haven with a score of ninety, Cornell nosing out Penn for first place. MacMahon placed fifth; Flanders, seventeenth; Stone, nineteenth; Hendrie, twentieth; Hennessy, twenty-ninth; the freshmen placed seventeenth. This run concluded the season.

Elmer E. Sanborn, '22, competitor in the famous Hunter mile in the B. A. A. games and in the Wanamaker special at New York, was elected next year's captain.

Officially recognized by the Athletic Association on October 5, the Soccer team under the managership of H. P. Kurzman, '23, started the year with a victory over the Boston Rovers. Then there followed a succession of victories and defeats. Defeated by Dartmouth in the first intercollegiate tilt, beating Worcester Academy, losing to Phillips Academy, defeated by Newton Saxonies, tying with Harvard, and defeated by Amherst—the team closed its eventful season with a dinner.

The boxers made their debut on January 14 when they met the Springfield Young Men's Christian Association mittmen. The team was late in getting into action, but it fought hard in the collegiate meets of the season. The Yale combination proved too strong for the local sluggers, and in the navy meet they failed to take a single bout. The unsuccessful boxing season is in some respects accounted for by the loss of a number of the best boxers, including Captain A. D. Addicks.

Whatever the mittmen lost, however, the matmen made up. The wrestling team turned in a good account of themselves this season, winning four out of seven meets. The seven-year-undefeated bull dogs of Yale were again beaten by the Institute grapplers. The Crimson wrestlers came in for a good beating in mat meet on March 3, in which Watts Humphrey starred with his favorite scissors-hold. Not disheartened by losing to the Princeton tigers, the Institute matmen handed Brooklyn Polytech the lower end of a 28-3 score the next day. Captain Butler, N. E. I. A. Champion in the 145-pound class, will again contend for the champion honors in the New England Intercollegiates this year.

The Institute mermen clipped the N. E. I. A. A. championships on March 12, for the second time in succession. The nearest competitor, Dartmouth, trailed with seven points behind the Beaver fish. The

season was a fairly successful one, but somewhat checkered. The swimmers lost to Rutgers but took every event from Rensselaer Polytech. They smashed two tank records at the Wesleyan pool, winding up with a safe victory, but lost to Amherst by a single point, and were then cleaned up by Brown. The Institute swimmers were no match for the strong Middies of Annapolis, but great was the rejoicing when they struck the Crimson colors for a 36-17 victory.

The husky gymnasts tied with Princeton in the first triangular meet, while Harvard drew a meager six. Failing to down Pennsylvania and Haverford, the gym team came back strong in the last triangular meet and flew the Technology banner over Yale and Harvard.

For the first time in ten years the Cardinal and Gray were seen in a varsity basket-ball game, when the Institute quintet clashed with Rhode Island State on January 15. The team, consisting of Boyer and Tonon as forwards, Breeting as center, and Hubbard and Blood as guards, revived basket-ball by winning the opening game by a score of 30-20. Flushed with the first victory the quintet went after Brown, but Bruin refused to budge. Undismayed by this defeat, the team outplayed Northeastern College. The Mass Aggies gave the five a second setback and a game with Harvard resulted in a crimson victory. After losing again to Amherst and Brown, and then to Bates, the team concluded the season with a victory over Boston University in Walker, which was partly filled with Boston University co-ed rooters, and a game with Harvard during Junior week.

With the turning of the sea-plane hangar into an ice-rink and the opening up of the new Arena in Boston, hockey stepped into the front line among the minor sports at the Institute. The Institute's hockey team christened the ice at the new Arena on January 7 in its opening ice-battle with Kings College, champion of Canada. The Canadian skaters just nosed out the Beavers in a close score of 4 to 3. The visitors obtained their winning tally in the last few moments of the game. Then there followed a succession of week-end games. The Institute puck-chasers lost the first Boston College game, and won the second game. The Crimson game resulted disastrously for the Institute men, but Dartmouth was unable to break through our defense. Our hockey team was not destined to win the Arena management cup, however, for Boston College captured the honor in the last game of the season.

Nearly one hundred and seventy-five candidates answered the crew call for candidates. The crew will again be put on the Institute map. The golf club was recently organized and is now practicing at the Winchester Country Club. W. M. Freeman, '21, is president of the club. A new 75-foot rifle range was recently completed next to the track field. It was formally opened on February 8 and rifle practice is now going on in full swing.

The indoor track took on a new form when more than one hundred athletes began training for the Boston Athletic Association games. The relay eligibles were gradually narrowed down to the required squads. Downey, Gurney, Bardes and Chittick made up the one mile relay

team which gave another stinging blow to the Crimson runners when it left Harvard's aggregation fifty yards in the rear in the Boston Athletic Association games. In the same games MacMahan, Hennessy, Stone and Snow trailed Syracuse and were followed by Dartmouth in the two-mile relay. Both MacMahan and Sanborn were entered in the famous Hunter mile, but failed to overcome Cutbill, the flying parson. There were also a number of other Technology entries. Chittick, who was "clocked at fifty-one seconds for his quarter," failed to overtake the lead of Penn and Syracuse starts in the intercollegiate one mile indoor championships at the Millrose meets in New York City, and the relay team obtained third place in the meet. MacMahan and Sanborn ran in the Wannamaker Special, which Joie Ray captured. Yale proved to be too strong for the Institute two-mile relay squad in the American Legion games. During the athletic carnival, the one-mile team was at Baltimore where it beat Penn for the second time in succession at the Johns Hopkins games.

Activities is the one word that best characterized the all-Technology smoker last October. The monster demonstration was the signal for the opening of competitions and the starting of the social life at the Institute. After the relays for supper, and the wrestling in the gym were over, manager Winter Dean, '21, called upon R. H. Smithwick, '21, president of the senior class, to start off the speakers. He was followed by H. C. Ham, '22, speaking for Tech Show, D. F. Carpenter, '21, who outlined the work of Technique; C. H. Talcott, '21, who briefly told of athletics; R. A. St. Laurent, '21, telling of the opportunities on *The Tech*; R. G. Pettengill, '22, for T. E. N.; G. F. Fargo, '21, telling of the work of the T. C. A.; W. M. Thomson, elaborating the advantages offered by the combined Musical Clubs; R. F. Officer, speaking for T. A. C.; A. D. Harvey, '21, telling of *Voo Doo*; L. W. Conant, '21, speaking for the professional societies and W. R. Barker, '21, talking on the point system. Dean Burton then warned the new-comers against going into too many activities. Frank Gage, '21, gave his musical specialties, intermingled with Tech Show sketches.

In the last chance to set the numerals on field day cup, the sophomores made a clean sweep of 13 to 0 and smashed the crew and football records in the annual scrap with the freshmen. In the general clean-up the sophomores clipped 1 1-5 seconds off a three-year crew record and rolled up a football score of 25 to 0. To complete the excellent job, the sophomores snake-danced into Boston at the close of events and disbanded on the Common, at the same time attracting a large crowd of citizens by their cheering. "As You Were," starring Sam Bernard and Irene Bordoni at Ye Wilbur Theatre was picked out by the Tech Night Committee for the conclusion of Field Day. Mr. Bernard wrongly interpreted the enthusiasm of the high-spirited assembly until someone shouted "Go ahead, Sam!" Then the show went on without a hitch. Frank Gage supplied the local humor, while the chorus was decked in Technology colors.

The Class of 1923 celebrated their field day victory over the

freshmen by the sophomore victory banquet on December 7. Five of Keith's *belles femmes* furnished the pep for the banquet, but contrary to instructions they circulated around the tables and began to fit action to the meaning of the songs. The Class cheered, indicating their appreciation. The Dean told of Tech traditions, and coach Frank Kanaly spoke on athletic wonders. Frank Gage, '21, lead in the singing of the new "1923 Victory Song," by J. A. Pennypacker, '23. The affair ended all too soon with the showing of field day movies and the awarding of numerals to the successful athletes.

The Tech was very busy this year with its own troubles, with banquets and with games with its sister publications. The honor system of distribution of copies of the publication was again tried this year and it proved to be more successful. A plan was tried of announcing on a bulletin in the main lobby the news of the next issue. This yielded a few more sales. Early in the fall it banqueted thirty heads of activities at Hotel Lenox. On December 9 it celebrated its fortieth anniversary in conjunction with its infant, the *Tech Engineering News*. J. Barleycorn, Ex-19, was greatly missed, and even "Ike" Litchfield's stories were unable to take his place. In the annual football scrap with 'Snique, *The Tech's* mighty eleven raised the dust, even though the powers that be decreed that the former should smother the powerful oliver-wreckers by an unusual score of 6 to 0. The winners were given a banquet at Riverbank Court Hotel in the evening. Many a freshman wished he had gone out for *The Tech*, when the publication played host to the members of the *Radcliffe News*. A tour through the Institute, an exhibition of a "real newspaper" at work, and a tea-dance in the faculty dining room of Walker was the program set for the fair visitors.

The Tech Engineering News is fast becoming a large factor among the undergraduate publications, (coming out the first of each month). Being fostered by *The Tech* it has now grown to such an extent, that it is able to stand on its own feet and has started out on the second year of its career having severed all relations with the managing board of *The Tech*.

Technique 1922 was busy the first term in rushing around for material for the "best Technique ever put out." It started its sign-up campaign on January 10, and the end of the week showed that the hustlers succeeded in disposing of over 2300 pasteboards. The new book came out during Junior week. During the election of the Technique 1923 electoral committee the Hare system of proportional representation was used for the first time in the history of undergraduate activities. The different factions of the sophomore class had a more even chance for representation and the usual group politics were avoided. The scheme worked out so well that the seniors decided to use it in the election of their class day officers.

Voo Doo, also known as Phosphorus, has been occupied with the frequent change of its personnel and its traditional attacks on *The Tech*. The *Voo Doo* is not censored, but it is enjoying the greatest circulation of any publication at the Institute. Kiko, who wields a wicked brush

on its front covers, has left his artistic work to join the colors of Costa Rica. He said, "A man from Tech has a good chance of being made general in Costa Rica." Time will tell us whether he can wield the bowie knife as well as he wields the brush.

Athletics consumed the lion's share of the front row during the second term. Nearly the same position was held by the professional societies during the first term.

To draw more attention in its drive for new members, the Aero Society exhibited a full-sized Averal plane in Eastman Court outside the main entrance. The two annual free flights at Lynnfield were expanded this year to six, but these had to be put off indefinitely last fall because the weather man refused to contribute his share. A succession of meetings and lectures on airplanes followed. Professor Warner, whose fame was established in the press of nearly every large city in the country, when he remarked that it was cheaper to travel by air from London to Paris than to ride in a taxi in New York City, was one of the principal speakers for the society.

The Chemicals started the year on October 21 with news of European industries. Professor Lewis succeeded in securing Dr. H. E. Fierz of the Polytechnique Institute of Zurich, Switzerland, who was on an inspection tour through the country, to talk on "Research in the Organic Dyestuff Industry in Switzerland." Visits to the Merrimac Chemical Company at Everett and to the Liquid Carbonic Company, Lever Brothers' soap factory, and the Boston Woven Hose and Rubber Company, all of Cambridge, were included in the trip program. An exhibition and lecture on the Cuttrel method of precipitation of dust by P. E. Landoldt of the Research Corporation of New York was eagerly received by the sophomores who found the subject hard to understand in the physics classes. Myron H. Clark, of the United States Rubber Company, lectured the society on the history of crude rubber. Over seventy future chemists forsook the laboratories and the chemistry classes for an all-day tour through the Amoskeag Cotton and Woolen Mills, Manchester, N. H., accompanied by Professors Haslam and Norris.

The Civils took in auto trips to the sewage plants around Boston and hit the trail for Buff and Buff, makers of scientific instruments. Among the speakers at the various smokers, were Professor Spofford, Professor Whipple, '89 of Harvard faculty, Lt. Col. H. C. Boyden of the Portland Cement Co., and J. Waldo Smith, '87. Mr. Smith, who is chief engineer of the board of water supply of New York City and who recently completed the seventy-seven million dollar New York water supply job, spoke on his experiences in the work before a crowd of record attendance.

The Mechanicals made a practice of showing five or six reels of movies at nearly every one of their smokers. It took them three afternoons to thoroughly inspect the factories of the Waltham Watch Company. The plants of the American Steel and Wire Corporation at Worcester, and the Watertown Arsenal were other places of chief interest visited by the student-engineers. Professor Hayward's lecture on

the different phases of mechanical engineering was well attended, as were the talks by Professor Allen of Worcester Polytech and Mr. Alford, vice-president of the American Society of Mechanical Engineers.

At a banquet on December 7, talks on mining in Peru, and movies on zinc mining, milling and smelting in the west, were the principal features of note in the Mining Society.

Corporation XV is now a real corporation, holding a real charter, and sells real stock at \$10.00 par. The board of directors and executive committee consists of L. W. Conant, '21, J. W. Kendall, '21, E. S. Russell, '21, A. W. Norton, '21, G. W. Pollock, '21; and the junior directors are T. W. Alder, '22 and D. D. Spoor, '22. We hope that Technology will not house second Ponzis, but who can tell?

The officers of the new Hexalpha Society, which consists of members of course VI — A. W. S. Ross, '21, president; G. F. Ownes, '21, vice-president; P. H. Rutherford, '21, secretary; and L. N. Brown, '22, treasurer — are endeavoring to fulfill the purpose of the organization "to aid those connected with the course in any way possible."

At the first smoker of the Architectural Society, the co-eds in the Rogers Building turned out in force and occupied the first row seats. Of course, the architects wouldn't miss a masquerade hallowe'en dance. The members of the society have been helping Tech Show in the different departments.

The radio bugs at Technology have determined to stop fooling with apparatus and now their I-AN station in the power building is one of the largest amateur stations in the vicinity. The installation of new apparatus enables them to send far south and west and with the help of powerful speaking tubes they are within a speaking distance of Chicago. The Radio Society recently installed a high-powered long distance receiving set with which I-AN is in direct connection with Europe. Nauen, Germany, and the Eiffel Tower in Paris can be easily heard. The Institute authorities have aided the society by installing a time-set at the station. This set is connected to the Institute clock system and every noon the exact time is received from Arlington. The Georgia delegation was entertained in the wireless room by a radio-phone concert during its visit here. Such demonstrations speak well not only locally, but outsiders are impressed by the importance of the professional activities at Technology. The trips and smokers during the year afforded much pleasure and were educationally valuable to the ether enthusiasts. Over four hundred radio amateurs from all over New England were present at the second annual invitation banquet given by the Radio Society, which is a member of the American Radio Relay League. Hiram P. Maxim, '86, president of the A. R. R. L. predicted a great conflict between the vested interests and amateurs, if amateurs are able to communicate with the Pacific coast without the aid of telegraph companies. The other speakers at the banquet emphasized the importance of the radio-engineer in the future and stressed the importance of non-interference by the Government.

Before a recent unfortunate controversy started, the Cosmopolitan

Club was one of the most influential factors in the social life among many of the foreign students at the Institute. The club has an enrollment of nearly two-hundred members and is headed by A. H. Rodriguez, '21, of Cuba. The club enjoyed a year of unprecedented activity by the innovation of frequent trips and frequent suppers. (Early in the fall it ran off a dance successfully.)

The California Club recalled the old Spanish days at an original Mexican Mission dance. It has held a few smokers since then. The Chauncy Hall Club, of which E. W. Booth, '21, is president, heard of France in the war. The purpose of the Episcopal Society, a newcomer, is to acquaint the one hundred and fifty members with each other at dinners, smokers and other festivities. The Menorah Society held a few well attended smokers and was represented at the Intercollegiate Conference held in Boston recently.

The Catholic Club ushered in a series of smokers and dances. Ex-Mayor J. F. Fitzgerald of Boston was one of its principal speakers. He also rendered his world-famous solo "Sweet Adeline." A dance at the Copley Plaza was very successful.

A renewal of a long lost acquaintance with Cleofan was not so effective as was rumored. The dance on November 30 was an exclusive affair and the co-eds issued only thirty-five invitations. Teas in the Margaret Cheney room are still in vogue. Cleofan also has done good work and deserves credit for its aid in the designing and making of the Tech Show costumes.

The dormitories started the entrancing jazz season with a hallow-e'en hop. The battle of music between Frank Gage's orchestra and that of Walter Johnson ended in a tie. Walker was crowded at the first Saturday afternoon dance held there. Railroad tickets replaced dance orders at the formal Junior hop. This was one of the finest dances ever held at Walker. The Soph Valentine dance was a big success and the domino decorations for the freshmen dance made a big hit. Over four hundred couples tripped the light fantastic toe at the Musical Club's winter concert at the Copley Plaza.

The Musical Clubs have given a number of successful concerts at the neighboring girls' colleges. They have met with enthusiastic audiences and the Sargent concert was run off so well that Sargent asked the clubs to come again. During the Christmas holiday the clubs made the first extended trip since the war. Concerts were held at Brooklyn, Cranford, N. J., Philadelphia, Washington, New Brunswick and Montclair, N. J. The tour was very successful and the appreciative audiences will look for them again next year. Each concert included, besides the regular musical program, readings and specialty acts by the Siamese Twins. The alumni in each city helped towards the success of the concerts and entertained the clubs during their sojourn.

A force of two hundred men under the leadership of H. P. Junod, '21, put Technology over the top in the Red Cross drive. Last minute rushes were necessary to get the twenty-five per cent of the student body.

Although taking the minor role among the activities at the Insti-

tute, the Chess Club is taking the major part of the victories in its games. It is a member of the Metropolitan Chess League of Boston and it chooses its team by competition. The chess team is the only one that can boast of having a member of the faculty; Professor R. E. Wilson is a regular winner on the team. Among the vanquished of the Technology pawn-pushers are Harvard, the Lighted Lamp, the Boylston Chess Club, the Suburban Chess Club, the Boston City Club and the Bay State Club. In a difficult match with the gray-haired players of the Boston Chess Club, T. M. Edison, '23, son of the great inventor, was the only Technology winner, while P. Kusnitz, '23, obtained the first draw. At present the club stands second in the Metropolitan Chess League.

The Technology Christian Association deserves much credit for the service it has rendered to the student body in general. It has furnished 1300 students with rooms, obtained over \$1800 worth of work for nearly 500 students, has sold \$2000 worth of books for students, has secured many men to carry on boys' work in Boston, and has tabulated at least one church of every denomination within a walking distance of the Institute. Among its extra-legal work is the furnishing of partners for Young Women's Christian Association dances. It has started Sunday night meetings at Walker, where prominent educational men lecture. Chiefly it secured Dr. Seerly of the Springfield "Y," who talked to 1400 students in the two-days he was here on the subjects of "Fatherhood" and "Motherhood."

NEW EQUIPMENT IN AERONAUTICS

MUCH new equipment has been received at the Institute of Technology consigned to the military science department and the department of aeronautical engineering from the War Department at Washington for use in the advanced military courses and in the newly established option in aeronautics. Among the airplane equipment are many models of the Liberty, Hispano Suiza, Benz, Fiat, Renault, Salmson, La Rohn and Clerget motors which are being mounted for preliminary tests to be made under Professor Riley of the mechanical engineering department pending the arrival of Captain White of the department of military science and tactics, who will assume charge of the advanced Reserve Officers' Training Corps Air Service Unit.

The Coast Artillery Corps Unit has acquired one of the latest models of the famous ten-inch howitzer. The piece, bearing its original camouflage is being temporarily mounted in one of the airplane hangars, where it will be used in connection with the fire control and field instruments for the coast defence material course.

THE UNDERGRADUATE EMPLOYMENT BUREAU

BY FRANK P. COOMBS, '23

Undergraduate Employment Bureau, Technology Christian Association

REMEMBER YOUR UNDERGRADUATE DAYS HIRE A TECH STUDENT THIS SUMMER

Can't you squeeze in a student this summer ?

Train him now, and after his graduation you will know where to find a man familiar with the routine of your organization, and of proven ability.

Such a man will "eat up" the chance to do work in line with his studies — this means you have his interest.

Perhaps you know of some one who is looking for a reliable man to help out around camp or summer home. Refer them to us.

We carefully select each man to suit your individual needs.

UNDERGRADUATE EMPLOYMENT BUREAU

Room 7, Walker Memorial Building, Cambridge 39, Mass.

The above notice was mailed to 8000 alumni of the Institute at the beginning of the campaign for summer jobs.

IN spite of the general industrial depression, the Technology Undergraduate Employment Bureau has definitely embarked on a campaign to secure a summer job for every Tech student who wants to work during the coming vacation. The vacation lasts this year from June 12 to September 23 and it is estimated that some 2000 men will be looking for work, of whom at least 1500 will look to this bureau to put them in touch with the right sort of a job.

The kind of work required varies, of course, with the individual. By far the greater part of the men are more concerned with the character of the work involved than with the money to be made. Some of them prefer to work for a company during the summer with which they may become connected after graduation. This arrangement is advantageous both to the employer and the student. The young fellow gets good, valuable experience, which will enable him to pursue his subsequent studies more intelligently. The employer, having trained him during his formative period, will after his graduation know where to find a man familiar with the routine of his organization and of proven ability. In this connection there are available at the Institute men both interested and experienced in construction work, drafting and designing,

surveying, machine-shop and other factory work, architecture, ship-building, chemistry and electricity, both from the research and the operating end.

Other students are looking for rugged outside work which will keep them in the open all day. These fellows prefer work as laborers, farm-hands or lumber-jacks. Still others are looking for less vigorous work and would like to drive an automobile, look after a motor-boat, clerk at a summer hotel, be a camp councillor, or make themselves useful in other ways around a summer place.

The bureau was organized in the fall of 1919 to relieve Dean Burton of the responsibility of securing work for those men whose financial circumstances made it necessary for them to support themselves either wholly or in part during the Institute year. In February of this year the bureau took over also the business of handling summer jobs, which had grown to such large proportions that it could no longer be conveniently managed by Mr. Lobdell, who had been in charge of that particular branch of activities up to date.

At the inception of the bureau the Technology Christian Association furnished desk-room, clerical help and financial assistance for printing and publicity, while five or six students, themselves working their way through the Institute, and under the leadership of Bradley P. Williams, '21, volunteered their services to carry on the work thus outlined.

Each day, at regular hours, one of these men, representing the bureau, interviews those students who apply for work, classifies them according to their ability and needs, advises them on financial matters, and encourages those more desperately in need. The interviewer knows from his card files and his familiarity with the students, the man best fitted for each job as it is referred to the bureau. His next concern is to get in touch with these particular students and "sell" them the job.

When not occupied in actual interviewing, the members of the bureau use what time they can spare in devising methods for bringing in jobs, by publicity or other means. They also investigate the more important prospects in order to determine more carefully the value of the job and the type of man needed.

During the first year, 1919-1920, the bureau was kept busy filling jobs. Every one was clamoring for help. Now a request for a man to wash windows, again for an investment salesman would be received and filled. One man from the Institute got a job as night elevator boy in a girls' dormitory at \$36 a month. Another saved room rent and made \$1.50 a day by sleeping in the same room with a somnambulist who wanted some one on hand to keep him from jumping out a window during the night.

About a hundred students combined business with healthful exercise over a period of ten week-ends by working as section hands for the Boston and Albany Railroad during that road's labor trouble last spring.

Junior Week a year ago came at a time when the freight tie-up all over the country was most acute. Twenty-six men from Technology were enabled through the bureau to be of use to several automobile

dealers in the Middle West who were having delivery troubles. Twenty-two drove Buicks east from Flint, Mich., two brought Cleveland cars from Cleveland, Ohio, and two very fortunate youths piloted Stutz roadsters all the way from Indianapolis. Every car came through in good order.

Of course the great bulk of the jobs located were of a less spectacular nature, but in all 248 different men earned \$11,789 on jobs obtained through the bureau during the Institute year.

In spite of adverse business conditions, the year 1920-21 has been even more successful so far, since up to April 1 nearly \$10,000 worth of jobs already have been found for needy students. Several interesting facts are brought out in scanning the records of the bureau. For instance, the most plentiful and least sought-after job is the selling or canvassing proposition, while the favorite job from the students' point of view seems to be either waiting on table for meals or tending a furnace and doing housework in exchange for a room.

Few figures are available so far with regard to summer work but it is certain that in regard both to number of men placed and total amounts earned, this branch of our activities will several times outweigh that of the spare-time jobs.

END OF STATE SCHOLARSHIPS

THE change in the Constitution of the Commonwealth will deprive undergraduates of the Massachusetts Institute of Technology of \$20,000 of annual scholarship awards. Technology has been notified by State Commissioner of Education Payson Smith that the ten-year contract between the Commonwealth and the Institute, by which Tech students who are residents of this State were eligible for the 80 scholarships allotted to Technology, has now expired and cannot be renewed because of recent amendments to the State Constitution.

More than 100 men who are recipients of the State awards will now be deprived of this form of scholarship aid. Although only 80 full scholarships are allotted Tech, two from each senatorial district, the awards were often split so as to benefit more men, who were in great need of funds to continue their studies. Mr. Humphreys, Technology's registrar, announces that all of Tech's funds available for scholarship aid are being used so that no relief is in sight for those who will be deprived of the State aid. This is bound to cause hardship among these men and will undoubtedly cause a good many to give up their work at the Institute.

ARE YOU INTERESTED IN TECH ATHLETICS?

An appeal to the Alumni—where a little money goes a long way—
statement prepared by the Secretary of the Advisory
Council on Athletics

1. By the constitution of the Advisory Council on Athletics the Alumni Association has ultimate control over the undergraduate athletics. Acting, as you know, in the majority of institutions there are faculty or joint faculty and alumni control. Technology, so far as I am informed, constitutes the sole exception to this rule in that the faculty *per se* exercises no voice in the conduct of athletics. This would seem to impose upon the Alumni Association certain responsibilities as a complement to its privilege.

2. Acting again under alumni and ultimately Corporation approval, the student athletics are supported by a self-imposed tax levied on undergraduates and collected by the Institute authorities, the money thus derived being used for the payment of the deficits which are inevitable under the conditions obtaining at Technology.

3. This student tax is of fixed and definite amount, dependent upon the size of the student body and subject to fluctuation only as the student census fluctuates. While the last few years have shown very material growth at the Institute it is, of course, clearly understood that owing to material limitations the growth of the next few years cannot duplicate that of the past few. Moreover, the relative increase in income would be more than balanced by the relatively larger number of men desirous of participating in athletics and hence a relative increase in cost commensurate with increased income.

4. Barring guarantees from outside competing teams and such few paid admissions as may come from guests of the student body, there is at the present time no definite method of augmenting this income. The payment of the student tax carries implicitly free admission to all athletic exhibitions and competitions carried on on the Institute property. The inaccessibility of the Walker Memorial to the general public limits this outside source of income to a point where it is almost a negligible factor.

5. The three major expenses incurred in the operation of athletics are: (a) Salaries to coaches; (b) Cost of equipment; (c) Traveling and hotel expenses. In the first instance you will appreciate that the last two years has brought about a very definite increase in the level of remuneration required in all fields of activity. In the second there is a complementary increase, while in the third the recent action in raising transportation rates by the railroads, coupled with the necessity of the hotels meeting the deficit caused by prohibition with increased restaurant

and sleeping rates, has raised the cost of operation by a very large percentage over that which obtained a few years ago. At the present time the athletic interests at Technology are operating a Freshman and varsity track team, a freshman and varsity cross country, swimming, boxing, wrestling, hockey, basketball and association football teams, and rowing and fencing; while there is a rifle and a golf team which are asking for recognition and assistance. This totals eighteen teams, almost the entire number of which are dependent upon the student tax for support.

6. Under the peculiar academic conditions which obtain at Technology it is impossible for the undergraduates to maintain a football team or a baseball team. In the first instance a football team constitutes a potential source of income. The figures obtainable from such colleges as Harvard, Yale, Princeton, Pennsylvania, etc., show the magnitude to which the receipts of this highly popular sport may attain. Harvard, for example, spends between \$160,000 and \$170,000 a year for her athletics, the major part of which is derived from the football receipts. Baseball, also a popular sport, is, in the larger colleges, a source of income, while in the smaller colleges it is at worst not a tax upon the undergraduate resources, and offers a splendid field for exercise for a relatively large number of young men.

The alumni can assist at the present time in two ways, both of which I hope may be invoked for the support and continuance of athletics. In the first place, by the purchase of tickets to the various local exhibitions and contests, they can add to the gate receipts direct. Free admission to these contests, as has already been said, is implied to the undergraduate body, but all spectators outside of this group may be charged suitably a fee for admission. It would be perfectly possible should a sufficient number of alumni signify their willingness to subscribe to have a postcard notification sent to each subscriber prior to each meet, so that they could be well informed in advance of such contest. This postcard notification could be suitably the work of one of the undergraduate organizations in whose hands the conduct of athletics is placed.

As a corollary to this, society and class meetings, which are held throughout the year, might be arranged to coincide with some contest to be held in the gymnasium, and, after the dinner, the participants in such meeting could then adjourn to a boxing or wrestling or fencing meet and a certain number of seats could be reserved for their use for which they could pay the regular admission charge. This first provision would give a certain definite increase in the income of the several sports but would not be enough to relieve the total acute situation which at present obtains.

The second factor, and the one which I wish to emphasize to you, is as follows: in addition to the above recommendation I would urge that through the association or class secretaries and similarly through the Technology Club Association that the several classes and the several associations should formally pledge themselves to turn over to the

Advisory Council on Athletics a certain specified sum each year to be used, under the direction of the Advisory Council, for the furtherance of the undergraduate athletics, the continuance of those which already exist and the development of new enterprises offering healthy, wholesome sport to an ever increasing proportion of the student body. If, for example, the classes would pledge themselves either a fixed sum, as \$50 per class per year, or a sum based upon the numerical membership of the class which would represent a varying amount from each of the above mentioned units, it would bring in an income of somewhere between \$2000 and \$3000 a year, and if this could be further supplemented by contributions from the various associations, either a flat sum or a varying sum based upon membership, this amount could be still further augmented.

In the opinion of the undersigned a sum not less than \$3000 per year should be guaranteed by the alumni through these channels as a minimum to permit of the continuance of athletics at their present level at the Institute, and any augmentation of this sum would be of great assistance and help in increasing the scope of already instituted sports on the one hand and permit of development of new sports on the other. It may be said that the policy of your Advisory Council has been always to further those sports offering a maximum of healthy, wholesome exercise to the largest possible number of the undergraduate community. (Although the competitive factor has never been overemphasized, the due recognition of the competitive factor as a stimulus to your individual undergraduates has been duly recognized.)

In conclusion, the undersigned holds himself in readiness to modify, amend, or expand this statement at your wish and pleasure. Trusting that the Alumni Association through you may see fit to take some action in the matter and relieve a condition which is acute at the present time and one of definite gravity in the future, I am, Sir

Respectfully yours,

ALLAN W. ROWE.

SHIPPING BOARD LENDS TURBINE

THE Shipping Board has lent a 40-ton turbine reduction gear to the Massachusetts Institute of Technology as an addition to its marine equipment in the engineering department at the institution. The machinery, which is 12-feet square, is now at the Boston Navy Yard, and it is expected that considerable difficulty will be experienced in moving it to Cambridge because of its size and weight. The reduction gear was taken from the steamer Eclipse when that vessel was equipped with electricity. It was shipped to Boston by water from New York.

VARSITY FOOTBALL NOT ADVISABLE

Dr. Rowe's reasons as given to *The Tech*

SIX reasons why a varsity football team at Technology would be impracticable are set forth by Dr. Allan W. Rowe, secretary of the Advisory Council on Athletics, in a letter to *The Tech*. There has been considerable talk concerning the inception of varsity football here which at times has seemed like a growing demand among the students for representation on the gridiron. Particularly was this true last fall when the football season was at its height.

The sentiment for varsity sport on a more extensive plane was voiced at a recent meeting of the Technology Athletic Club by the club president, Watts S. Humphrey, '21, who said: "It is logical to suppose that we may have a varsity baseball team here in the spring."

In reply to this, at the invitation of *The Tech*, Dr. Rowe gave his opinions in a long letter, of which we print the conclusion:

"To summarize, then, if Technology were a collegiate institute operating on the elective system so that the men were free to select courses giving them the major part of the afternoon without class exercises, if with such a large group of young men with the undoubted material which we have at Technology football could be started, it would, in the opinion of the undersigned, be a practicality to invest a sum of money in the development of a team which would in time become self-supporting and constitute a potential source of revenue. Since, however, the primary condition, that of adequate time for practice, can never be realized by students at Technology, as the demands of professional study are increased with every year, it is with much regret that the writer expresses himself of the opinion that it is entirely impracticable to establish football at Technology as a varsity sport. The operation of class teams, where the expense is trifling and the level of performance mediocre is an entirely different matter, but the building up and development of a first class varsity team lies outside our province at Technology as indeed it must at any professional school where the academic level is comparable with that of Massachusetts Institute of Technology.

"At the present time we are operating some twelve or thirteen teams, giving healthy athletic employment to a large number of young men at the Institute. To take half of the available funds for a football team would of necessity render it impossible to carry on more than a small fraction of the teams now operating, thereby cutting down the number of men able to engage in sports, with no practical advantage accruing to those who were provided for."

ARMY ORDNANCE SCHOOL TO COME HERE

Another government job for the Institute

THE Ordnance School work, which has been given at the Aberdeen Proving Ground, Maryland, will be conducted at Technology from now on. The course for the Ordnance Officers has consisted of one year at the Aberdeen School, and then a year at the Watertown Arsenal, in connection with which three courses were given here at the Institute. Because of the earnest efforts made at the Institute, and the interest shown by the Faculty, especially Professor Edward F. Miller, head of the Department of Mechanical Engineering, it was felt that the courses could be combined at less cost to the Government, and that the principles used in designing, and their practical application could be taught more efficiently at an institution such as Technology.

Until now the course has consisted of two parts, the first year at the Aberdeen Proving Ground, at which the Design of Ordnance was studied, and the second year at the Watertown Arsenal which was shop work and practical work in the laboratories. In connection with the work at the Arsenal at the present time courses in Machine Tool Work, Heat Engineering, and Engine Laboratory are given at the Institute. It was mainly because of the satisfaction of the Department with the training now given the men here, that the decision was made to give the men the other training here, also.

Special courses have been mapped out for the men who will take the ordnance work here. These special courses will be given in Applied Mechanics, Chemistry of Powder and Explosives, Practical Electricity and Design of Carriages, Guns, Projectiles and other ordnance equipment.

The men will spend from July 5 to May 5 at the Institute. This will be followed by a year at the Watertown Arsenal, where the men will go into the shops, and under the direction and instruction of the foremen and superintendents, will learn the practical side of the work. They will be given practical work in moulding, foundry, pattern-making, machine work, heat treatment, and all the other processes that are involved in modern ordnance work.

There will be from twenty to thirty men entering the course every year. These men are all graduates of colleges, or of West Point. The courses they take here are not the same as those of the same names now taken by the undergraduates, but are advanced courses. These men have had the preliminary work, and these courses are designed to give them a chance for thorough assimilation of the principles involved. They must not only be familiar with the principles, but be able to apply them quickly and surely. That is the reason why the first two years of an officer's time in the Ordnance are taken up with this preparatory work.

Many of the machines in the Ordnance must be very light and carriages must be designed to weigh as little as possible. Oftentimes a factor of safety of one and three-quarters or two is all that is allowed, and under these conditions the designer has to be sure of getting in all the stresses and getting them correct. The course in Ordnance is designed to give the men such a thorough training that they can work under these conditions and not make costly mistakes.

After completion of the course the men will go into the regular work of the Ordnance for a period of from three to five years, at which time they will be given an opportunity to again come to the Institute to specialize in such subjects as they have found that they need. There are now six such advanced officers at the Institute. Two are studying powder and explosives, three are specializing in mechanical engineering subjects, and one is specializing in gas engines. Upon completion of this part of the course the Master's degree is given.

TECHNOLOGY PAYS ITS WAY

The other side of the taxation question

To hear the municipal officials of college towns talk, you would think that the presence of a fine educational institution was a big disadvantage, since so much of this property is exempted from taxation. Northampton people have always kicked because of the exemption of millions of Smith College real estate. Now come the city officials of Cambridge, and find fault that \$32,000,000 worth of stuff belonging to Harvard, Massachusetts Institute of Technology and Radcliffe, can't be taxed. They want the State to reimburse them.

Harvard and Tech don't pay much in taxes, but they support a vast body of boarding-house and eating-house keepers who do. They provide business for a great body of tradesmen and mechanics, all of whom are taxed. Cambridge is one of the richest of Boston's suburbs, with 80 per cent more valuation than Somerville, for instance, while having 25 per cent more population. Probably this greater prosperity is due more to these educational institutions than to any other one cause. Cambridge can't eat its cake and have it too. — *The Salem News*.

THE INTERCOLLEGIATE CONFERENCE

Technology the host — problems of student life discussed — large attendance from other colleges

THE first intercollegiate conference on student government and undergraduate life ever held in America, suggested, sponsored, and carried through by Tech men, was held most successfully at the Walker Memorial on Friday and Saturday, April 15 and 16, with the undergraduates of the Institute acting as hosts to a hundred and fifty men from forty other men's colleges and technical schools.

The idea of the Conference originated with Technology. Dean Burton made the suggestion before a meeting of the Alumni Council and it was taken up by the Institute Committee last November. A meeting was called of representatives from Princeton, Cornell, Dartmouth and the University of Pennsylvania, with the Technology representatives. This convention met at the University Club, New York City, December 22, 1920. There was some discussion as to the place of meeting of the Conference, and Pennsylvania was much interested in having it held in Philadelphia. Technology was finally chosen and a Technology man, W. R. Barker, '21, was appointed chairman of the Executive Committee of the Conference.

The question of financing the Conference was entirely taken over by the Alumni Council of the Institute. President Metcalf, '90, of the Alumni Council has done much to further the arrangements, the committee states.

Whether or not the Conference should be a periodic affair was also discussed at the New York meeting. No definite decision was reached, the intention being to submit the question to the entire Conference at the banquet-meeting on Friday, April 15. Sentiment shown at the first discussion seemed to indicate that a repetition of the event will be probable.

The arrangements for the Conference, prior to the arrival of the delegates, was entirely in the hands of a committee appointed by the Institute Committee. This committee of arrangements consisted of the following men: W. R. Barker, '21, chairman; O. G. Williams, '22, printing and correspondence; Roderick Haskell, '22, treasurer; D. K. Linsley, '22, entertainment; H. C. Gayley, '22, banquet; W. C. Roberson, '22, dance; H. M. Shirley, '22, accommodation.

The alumni of Technology were heartily back of the conference. Mr. H. E. Kebbon, '12, of New York lent his aid to the executive committee from the very start. He made all the arrangements for the meeting in New York at the University Club on December 22. He used his influence in New York in bringing about the success of the meeting.

Although Pennsylvania was anxious to have the conference held at Philadelphia, the fact that the Alumni Council indicated that it would back the affair, helped the final choice of Technology. From then on the Advisory Council on Undergraduate Activities took a prominent part in helping arrange the meetings of yesterday and today. Orville B. Dennison, '11, D. G. Robbins, '07, John Debell, '17, Isaac W. Litchfield, '85, Walter Humphreys, '97, and Leonard Metcalf, '92, together with the Dean and Professor Pearson of the English Department were especially connected with the conference. These men procured the speakers, made suggestions as to arrangements and acted in an advisory capacity in general. Some of them attended the meetings of the executive committee, while others helped in different ways. President Metcalf of the Alumni Association, put much time into the affair and wrote to the deans and presidents of the colleges and universities of the country, enlisting their influence in sending delegates. The replies were very encouraging.

The first event of the conference was the meeting in Smith Hall at noon on Friday, at which Doctor Talbot, Dean Burton, R. H. Smithwick and R. W. Barker, spoke. All the delegates were assembled there, after which they went to Walker to get their pictures taken.

Doctor Talbot welcomed the delegates in the name of the faculty and said that activities are an excellent thing provided a proper balance is obtained between them and the curriculum requirements.

Dean Burton stated that he does not have to confront the problems that other college deans have to face, as undergraduate activities at the Institute are not regulated by the faculty. He explained that this is the outgrowth of the fact that Technology has been largely a day school with almost no dormitory life, and he added that he considered it beneficial as it gives men engaged in activities a chance to display initiative, which is not the case where the activities are faculty regulated.

The dean went on to explain that each activity is supervised by an advisory council of the Alumni Association. He explained that this has a steadying, without the limiting effect that often comes where direct control is exerted. He stated that the delegates would do well to note the working out of this system, as it has many desirable features, although there are also disadvantages.

R. H. Smithwick welcomed the visitors in the name of the Institute Committee, while W. R. Barker gave a few directions to the delegates ending with the statement that a picture would be taken on the steps of the Walker Memorial building.

By the opening of the afternoon session most of the delegates had registered and the sectional discussions were able to open with a large and interested attendance. These sectional conferences lasted through Friday afternoon and Saturday morning. On Saturday afternoon there was a general meeting at which general reports were given.

The most stimulating fact about the whole conference, to those who promoted it, was the large percentage of representative undergraduates, occupying important positions in their schools. This means

that the Conference was considered important and, further, that Technology is to be considered definitely "on the map" in future intercollegiate relations.

The Institute was represented by R. H. Smithwick, president of the senior class, A. J. Browning, general manager of *The Tech*, S. Nixon, manager of the Tech Show, and William W. Russell, president of the Massachusetts Institute of Technology Athletic Association.

Harvard sent H. H. Faxon, president of the student council; R. K. Kane, captain of the football team; H. D. Smith, president of the *Harvard Crimson*, and W. M. Fawcett, head of the Pi Eta Show.

From the University of Pennsylvania came Charles Thompson, chairman of the *Pennsylvanian*; J. C. Telmosse, president of the senior class; H. Baxter, representative of the Student Government, and K. H. Kurtz, president of the junior class and associate editor of the *Pennsylvanian*.

University of Michigan was represented by P. W. Eaton, president of the *Michigan Union*; G. A. Gaines, president of the Student Council; G. O. Brophy, Jr., chairman of the *Michigan Daily*, and L. E. Waterbury, chairman of the *Michigan Chimes*.

Among Dartmouth delegates were C. R. Freeman, manager of the football team and president of the Student Council; Jack Hubbell, manager of the baseball team; L. B. Jordon of the football team, and S. B. Gorham, representing the dramatic interests of Dartmouth.

F. Eldeane of the University of Missouri came to the conference as the delegate of the Western Conference of Colleges which has just taken place.

The University of Chicago sent G. Harding, who is the head of the Student Government.

R. E. Naylor was one of the delegates of the University of Illinois.

McGregor Smith came from the University of Tennessee and represented the publications of the University.

Princeton sent T. C. McEachin, Jr., chairman of the *Daily Princetonian*, editor-in-chief of the *Handbook*, and a member of the executive committee of the Philadelphia Society. With him was H. A. Callahan, captain of the football team, and senior councilman.

Among those from the University of Virginia was J. A. Steward, member of the Students' Council and of the Honor Committee, and president of the Academic Department.

Yale was represented by W. C. Root, chairman of the *Yale News*, and a member of the hockey team; E. F. O'Brien, chairman of the Sheffield Students' Council, and a member of the Cloister; and C. P. Luckey, assistant manager of the football team.

The University of North Carolina sent D. Grant and T. C. Taylor. Grant was a member of the debating team, a member of the Senior Honor Organization, The Golden Fleece, editor of the *Tarwheel*, and speaker of the Literary Society. Taylor is editor-in-chief of the *Carolina Magazine*, and president of the Literary Society.

Other prominent delegates to the conference were: E. A. Fargo,

captain of the Williams College football squad; D. B. Strickler of Cornell, a member of the Athletic Association and Student Council; H. Schauffler, editor-in-chief of the *Williams Record*, and F. Elsley of Wesleyan, editor-in-chief of the *Argus*.

The chief affairs of the Conference were dealt with in the four simultaneous meetings held in Walker Memorial. These were held as follows: Student Governing Body, north hall; Publications, faculty reading room; Athletics, library; and, Musical Clubs and Dramatics, west lounge. A member of the Executive Committee was in charge of each meeting and the remainder of the delegates were divided between the four according to the activities which they represented.

One of the matters that attracted particular attention in the discussion on the question of the Student Governing Body and General Problems, which was led by J. C. Telmosse of the University of Pennsylvania, was that of the relative powers of the faculties of the various colleges and the student councils, and the method of controlling publicity given to campus occurrences. These as well as other matters relative to the governing of student bodies were taken up. The conference for the most part consisted of the outlining of various systems by the delegates from the colleges in which they were in operation, and then a discussion on those conditions with which certain institutions had experienced difficulties.

The outlining of the different forms of student government by representatives of the different colleges brought out the fact that the powers vested in the faculty varied a great deal as to the form of the governing bodies. The powers of the faculty varied from that of the veto and of final decision, to having merely advisory power. Technology proved to be further developed in the line of student control of the undergraduate affairs and policies than any other institution represented.

The construction of the governing body was found to depend in a large part upon the size of the college and the number and unity of the departments. The institutions which embody a large number of separate units favor in many instances either independent councils for the different divisions, or a representative system involving two bodies, similar to the composition of the federal government; the smaller colleges using just one council.

What particularly concerned the delegate from the University of Michigan was the method of suppressing what proved to be rather unwelcome publicity which was given unseemly actions on the part of members of the undergraduate body, such as occurred, for instance, in one of the "after the war excesses, namely, indulgence in concoctions of alcoholic content." The most acceptable solution offered to this was brought forth by Columbia; it consisted in essence in the control of all publicity through a press bureau. The Department of Public Information at this institution is made up of members of the faculty and employs a regular newspaper man.

The organization and finance of athletics played the biggest part in

the discussions of the Athletic Division. Under the supervision of D. B. Strickler, of Cornell, sports delegates from all parts of the country threshed out their difficulties in the control of athletics and ways of raising and spending money.

Practically all the colleges represented reported advisory boards in charge of athletic administration. In the system at Ohio State, which is probably typical of this type of management, the executive committee consists of five faculty members, two elected alumni, and two students. In most of these boards the balance of power is held by the alumni, the students and faculty being the opposing factors. Williams had an interesting session last fall when the undergraduates and the team disagreed with the council on football coach. The students carried off the victory.

An interesting discussion was brought up by John Hamilton of Amherst, who claimed that complete student control left too much detail and routine for them to do. Bill Russel of Technology said that with a plentiful supply of assistant managers and a stenographer there was no trouble in that line. One of the advantages of faculty representation is that men with several years experience are always on hand. By a system of competition for managing positions and election to responsible offices in the junior year this advantage can be balanced. Charles Brokaw offered the Institute point system to prevent too much work being placed in one man's hands.

E. A. Fargo, of Williams, presented a very satisfactory method of apportioning the student athletic tax. At Williams a percentage of the room rent is the basis for taxation. Men paying a high rent are also assessed a high percentage, up to 25 per cent. Men working their way through school are exempt from the charge. A receipt entitles one to free admission to home sporting events.

Practically all the schools levy a student tax in one form or another. At Columbia the newspaper, comic magazine, theater night and athletics are all covered by a \$20 charge. The allotment of the tax to sports in most of the colleges varies between \$10 and \$15. Here at Technology the share is \$2.50. All Harvard teams are supported by the huge gate receipts on football. The University of West Virginia sells coupon books which are good for all undergraduate affairs.

After gathering the money together, the next problem taken up by Chairman Strickler was methods of spending it. At all the colleges the varsity teams are equipped with new outfits each year. In some cases the discarded varsity outfits are used by the scrub and class squads. Cornell and Technology were the only schools not awarding the seniors their sport clothes. Pennsylvania goes to the other extreme, permitting all second, scrub and class teams to keep the supplies furnished them.

The big discussion at the meeting on publications was on the formation of Press Clubs, and the regulation of news to outside papers, through undergraduate channels. Chairman McEachin gave some valuable information on the system as it exists at Princeton. Here the Press Club is made a social organization, open to competition. The

number of candidates is so large that many can be eliminated, and the best men retained. The city papers are given an opportunity to choose reporters from the club, but in the event of appointment by the club the choice is almost always accepted by the paper.

H. D. Smith, speaking for Harvard, indicated the press control there. The *Crimson* is given a large share of the influence, as the men get most of their information from galley proofs of the *Crimson*. There is also a bureau which sends out college information to the reporters with the release date attached. Such news is released in the *Crimson* and the Boston papers at the same time. By a policy of helping the outside reporter, the news service at Harvard has been conducted very smoothly.

Other men, representing Yale, West Virginia, Michigan and other colleges, also gave their views on the best methods of running such publicity. In view of the work of organizing the Massachusetts Institute of Technology Press Association, this discussion was very timely, and will prove of great value.

The subject of college handbooks was also brought up. There was no question on this which seemed to need the attention of the meeting and the matter was dropped after a few words by Chairman McEachin of Princeton. Under literary magazines, a good deal of discussion took place. The opinion of many delegates was that the spirit of the magazines in most colleges was tending to cater to the pictorial section, to increase the number of cheap and sensational stories, and to lower the real literary value of the magazine. This, it was pointed out, was defeating the very purpose of the publications, that is, of helping the student body in learning to write good English, and in producing something a little finer than the average run of college writing.

There was a little talk on the subject of technical papers in school, St. Laurent and Patty speaking for Technology on the *Technology Engineering News*. A number of the delegates were interested in the subject, as more papers of this class are being organized every year. St. Laurent stressed the importance of advertising, and favored the placing of the details of the work in the hands of an agency.

The conference on musical clubs and dramatics was held in the west lounge under the direction of S. B. Gorham of Dartmouth, who acted as chairman. The meeting considered four phases, namely, musical comedies, mystery dramatic plays, trips and finances.

Stuart Nixon, '21, general manager of Tech Show, gave a report on the show and its organization. At the close of his report there was considerable favorable discussion on the ballet.

W. V. M. Fawcett of Harvard described the organization of the Harvard dramatics, laying stress upon the two dramatic clubs, Pi Eta Club and the Hasty Pudding Club.

A. W. Jackson of Princeton, reported on the Triangle Club which is similar to the Masque. They have a professor of dramatic literature for coach and have a system of preparing men to act as assistants to the coach.

S. B. Gorham who acted as chairman, described the Dartmouth system of presenting plays. In the fall one act plays are presented by the candidates for the show which comes later in the year. The cast is chosen from these one act plays and the work is carried on throughout the school year. Considerable discussion was carried on relative to dramatic clubs by representatives from Michigan, Harvard, and Ohio states.

Mr. Royal, of North Carolina, described in detail their success with pageants and folk plays. One act plays were discussed by Lafayette, University of Pennsylvania, Brown and University of Maine.

After the Friday afternoon session the delegates scattered to various fraternity houses; to the Harvard Union and the Walker Memorial for dinner.

On Friday evening Technology outdid herself in the formal dance for the Intercollegiate Conference. Cutting-in was permitted throughout the evening, and did much to make the evening really entertaining for the 130 delegates, most of whom are strangers to Boston and hence know few if any fellows with whom to exchange dances.

Supper was served during the intermission at 11 o'clock. A fruit salad, sandwiches, ice cream, cookies and coffee were served in the two balconies, north hall, and the faculty dining room.

Mrs. Cunningham, Mrs. Edward Miller, Mrs. Frank Aydelotte, and Mrs. Henry P. Talbot were the chaperones for the affair. The general committee served as ushers. The committee for the dance were: W. C. Roberson, '22, chairman; H. J. Horn, '22; A. L. Johnson, '22; W. G. Loesch, '21; T. T. Miller, '22; R. Rundlett, '22. The dance committee wishes to express its appreciation to all who helped to decorate the hall for this affair.

From the banquet Saturday evening which closed the conference seemed to emanate just the spirit necessary to give the finishing touch to the work of the assembly; such is the feeling of those who attended. The addresses were for the most part, humorous; they were received by an attentive audience throughout.

No official announcement has as yet been made relative to the work done by the Conference, or any conclusions arrived at; however, the transcribing of the minutes of the various meetings is now under way, and a full report of the proceedings will be published and distributed among the various colleges that participated, in the near future.

Leonard Metcalf, '92, as toastmaster, welcomed the guests to the affair and introduced the speakers. W. R. Barker, general chairman of the executive committee of the Conference, made a few brief remarks in the form of announcements. T. C. McEachin, Princeton, moved that the Conference convene two years hence, at Philadelphia, for the second meeting. The motion was carried unanimously. Following this the visiting delegates gave a rising vote of thanks to Technology for the work of Institute men in caring for the Conference.

Dr. Frank Aydelotte, president-elect of Swathmore College, gave the first address. He spoke on the university life at Oxford, remarking

on the fact that there is no student government in the English colleges. A number of amusing incidents of life in the college were related by way of illustration. Particular emphasis was laid on the idea that more responsibility should be placed on the students.

The second speaker was Dr. Edward Cummings, of the World's Peace Foundation. He introduced his remarks by several humorous stories and then carried his hearers through an allegorical sketch of the world situation. The theme was that the great world forces are patriotism and religion, and that future world civilization depends on a feeling of world brotherhood.

Mr. John Philipps, general secretary of the New England Rotary Club, told of the business man's appreciation of the college education. Mr. Roach, of the American Red Cross, gave the closing talk on some of the works of the Red Cross and the ways of service open to college men.

A complete record of all Technology activities was prepared by a class in English 33, to be used as a reference book during the Intercollegiate Conference so that any question concerning Technology activities which may arise can be answered without delay. After the Conference the record will be turned over to the Institute Committee which will under all probability have the record reviewed by the Activity Committee, after which it will be placed on file in the library of Walker for general reference.

The class preparing the record was under the supervision of Mr. Prescott of the English Department. J. C. Patty, '22, acted as chairman of the class. The others of the class were divided into four committees: student government, D. D. Spoor, '22, chairman; athletics, L. B. Laird, '22, chairman; publications, M. M. Bauer, '21, chairman; dramatics, W. C. Gray, '23, chairman. These subchairmen were directly responsible to Patty. There were in all twenty-seven students working to prepare the report. It was a rather difficult job preparing this report but the work has been done well.

"Student Activities at M. I. T." is the title of the report. It consists of two volumes: one entitled "Report," the other "Appendix." The "Report" contains a complete report of the organization, finance, and a conclusion which sums up the present work and the plans for the future. The "Appendix" is a series of separate reports on the various activities. Each of those reports contains a table of contents to facilitate the use of report. Many of the reports are made clearer by the use of graphs, diagrams, and samples of blank forms like those used by the various activities in their work. In the back of the "Report" is a complete index of both books. These books were of great value at the conference, and form a permanent record of unusual value.

HONOR DR. WHITNEY WITH PERKIN MEDAL

Highest honors of science awarded to non-resident professor of chemical research at the Institute

IN recognition of his many contributions to scientific knowledge Dr. Willis R. Whitney, '90, non-resident professor of chemical research and member of the Corporation has been awarded the Perkin medal, one of the greatest honors in science, given for the highest achievement in applied chemistry. The medal is named after Sir William Perkin, the distinguished British chemist and discoverer of the first process for the manufacture of aniline dyes from coal tar.

Dr. Whitney graduated from the Institute in Course V in 1890 and in 1896 he received his doctor's degree from the University of Leipzig, Germany. He returned to the Institute as assistant instructor in sanitary chemistry and later he became assistant professor of theoretical chemistry. Since 1900 Dr. Whitney is director of the research laboratory of the General Electric Company at Schenectady, N. Y.

The best known work of Dr. Whitney is the perfection of a detector for giving warning of the approach of submarines. This invention was put into use during the latter part of the war at the Nahant station of the United States Navy.

During the war he was a member of the Naval Consulting Board and did much in the development of radio telegraphy and telephony. He made the first radical improvement in the carbon incandescent lamp since its invention by Edison, having invented the metalized filament.

The medal was presented by Dr. Charles F. Chandler for the American Section of the Society of Chemical Industry.

In his address of acceptance of the medal, Dr. Whitney said that one of the greatest advantages in chemical science had been the doubling of the number of available metals and thus making possible the development of valuable alloys. He added: "Possibly one of the biggest things in chemistry lies in agriculture. It is admitted that we need more and better fertilizers. We now use nearly \$200,000,000 worth annually. It is true that we have spent many million dollars on nitrate plants. We want synthetic ammonia, and we can get it because, during the war, we were forced to adopt production methods derived from foreign chemical research."

Dr. Whitney is a director of the American Chemical Society of which he was president in 1909. He served as president of the American Electrochemical Society in 1912, and he is also connected with the Society for Testing Materials, the American Institute of Mining Engineers, the American Academy of Arts and Sciences, and other scientific organizations.

CO-OPERATIVE ENGINEERING

BY W. F. HAEHNLE

*Professor of English, College of Engineering and Commerce of the
University of Cincinnati*

THE Schneider plan of co-operative engineering, of which the College of Engineering of the University of Cincinnati has been one of the foremost exponents since 1906, has not only effectively solved the problem of co-ordinating theoretical training with practical factory work, but has also prompted correlation of the various courses of study to a degree unknown in most scientific schools. The plan was originally adopted to present to the student, simultaneously with his studies, the difficulties met in the application to the industries so that he would more clearly understand the mutual interests that bind the two together.

The college is, of course, most interested in the educational value of a student's co-operative job. Consequently the question of wages is not permitted to interfere with the important work of the co-ordinator, whose task it is to see that every co-operative student under his supervision is engaged in the kind of work that will best prepare him for his profession. When a student has exhausted the possibilities of one job, he is advanced to another. As a consequence of this gradual promotion, the majority of the students taking the co-operative course are in positions of some responsibility during their last few years, and they are paid wages which enable many of them to be self-supporting. It often happens that the change from school to professional life means only a cessation of classroom work and the assumption of full-time instead of half-time duties with the same firm.

The factor that has arisen from this plan, which is most novel to the world of technical education, is the development of the interrelationships that exist between the various subjects of instruction. The fundamental courses given in the first two years are developed from a small body of basic principles which are emphasized repeatedly in the various problems to which they apply. Thus, in the first year, mathematics, mechanics (statistics), and drawing are frequently brought into intimate contact. A problem in mechanics may be solved as a problem in trigonometry, and at the same time by a graphic construction on a drawing plate; a problem that arises in physics and dynamics is used as an application of the calculus.

In brief, the courses in which this has been practised comprise two principal groups; in the first year, elementary mathematics, statistics, and engineering drawing; in the second, the calculus, dynamics and physics. The philosophy of the system of correlation is given in the report of the Committee on Mathematics and Sciences, headed by Professor R. C. Gowdy of the Department of Mathematics and Professor

Louis Brand of the Department of Physics. A brief summary of the report on the correlation of studies during the first year follows:

In order to obtain the maximum of synchronized correlation among the fundamental engineering studies during the first year, three courses have been recommended. The first of these is a course in elementary statistics, the second covers the essentials of elementary algebra, trigonometry and analytic geometry, and the third is mechanical drawing and descriptive geometry. In the sophomore year, the coördinations are even greater, because they involve calculus, physics, mechanics and engineering design. It should be apparent that in this year particularly the interweaving of the different theories can be brought to the highest stages of success.

The trial of the system so far this year indicates a very satisfying advantage over the old method. There is no doubt that the fundamental principles of mathematics and sciences become a part of the student's working equipment and do not remain abstract theories. It has been found further that with more rigorous requirements in daily classroom work, there has been a decrease in student mortality which can be accounted for only by the fact that the correlations permit a student to grasp the principles taught. All courses of instruction during the first two years are nearly identical. The courses vary appreciably in the summer following the second year, however, and diverge more and more throughout the third, fourth and fifth years.

In April, 1919, following the merging of the College of Commerce with the College of Engineering, the co-operative plan was extended to include commercial training. The course in commerce, like that in engineering, is five years in length and operates eleven months during the year. The courses of study for the first two years are exactly the same as those pursued by the engineering students. After this period, the student receives his advanced training in marketing, accounting, finance, business law, world geography, and other commercial subjects.

The course was started as a result of the demands of industries for men who know both production and commercial work, and who have a thorough training in the sciences underlying both. Hence, the outside work is done mainly in the large industrial firms. The student spends his first two years in production departments and the subsequent years in commercial departments. The response, both from the students and from the firms, has been significant. Industries with which the college had been doing business promised enough co-operation to meet the demands for a number of years to come.

Although the actual school time in the five-year co-operative course is only 81 per cent of that in a regular four-year course in engineering, the co-operative students advance further in the theoretical field than do the regular students by reason of the fact that the work during the bi-weekly period is more intensive.

Another obvious advantage from the point of view of the college is that the university plant and the instruction staff can take care of approximately twice as many students as under the continuous plan.

Further economies are made possible by the elimination of practice shops. This means that more money is available for salaries and for the equipment of scientific laboratories, and makes for a more efficient mode of instruction and a higher standard of graduation.

—*The Tech Engineering News.*

HOW ABOUT M. I. T.?

STUDENT participation in all branches of extra-curriculum activities is heartily encouraged by the faculty of the University of Cincinnati Engineering College. In order to facilitate this, the faculty of the college has decided that the hour from one until two every day shall be devoted to extra-curriculum affairs. During this period, every student in the college will be engaged in some form of activity, a form which has been chosen by him. This plan is based on the physiological fact that a student can do more effective work during a seven-hour day, if the intensive work of the four-hour morning period is separated from that of the afternoon by an hour of relaxation. To promote this, the students in the several departments have their own clubs, which meet once a week to discuss technical problems that arise in connection with the outside work done by the students. Opportunity is given in these meetings for that extemporaneous discussion which will prepare the student for effective oral expression.

CONCERNING LOANS TO STUDENTS

About bread cast upon the waters, etc.

BY PROFESSOR W. T. SEDGWICK

The following suggestive article was found among Professor Sedgwick's papers. In connection with Dr. Maclaurin's comment, it offers much food for thought, especially at the present time.—Ed.

IN October last a student not in my Department and having no special claim upon me excepting a slight acquaintance, appeared in my office and said that a friend who had promised to supply him with money enough to enable him to finish his course at the Institute, had suddenly, unexpectedly and completely, failed him, so that he found himself in the Massachusetts Institute of Technology at the beginning of the year without a cent with which to pay his way. Having ascertained that it was too late for him to secure scholarship aid (in spite of the fact that the man had a very high record) I asked him to estimate closely the sum which would be required to carry him comfortably yet economically through the year. This he reported in itemized fashion at \$975.

Thereupon I wrote to certain well-to-do and charitably-disposed friends, asking each to lend my young friend (since he insisted on having any help regarded strictly as a loan) \$300 each, and from one of them soon received the following reply:

"October 24, 1919.

I have your note in regard to the wants of the Technology student but I have not had much satisfaction out of loans to students in the past. Of such loans I have made some half dozen and have only been repaid twice. From the others I have never heard even a single word. My father made many of these same loans and he had the same misfortune.

The boys never think of writing and giving an account of their doings, but leave you in the dark as to whatever becomes of them. Of course many of them may have had all kinds of misfortunes and may never have been able to return the money, but I feel that this came so easily to them they think that it makes no difference to the lender whether the loan is ever repaid or not, and they let the whole matter go.

Now having had my say and so relieved my mind, I eat my words and enclose to you my check for \$300."

This letter had barely been acknowledged, and with proper expression of gratitude, when one morning I found upon my table the following:

"October 30, 1919.

It is twenty years since I finished my course at the Institute, and

during my last year there I received help from a scholarship to the amount of \$125 which you were influential in getting for me.

I have always considered this money a loan, and I ought to have paid it back long ago, with interest. I am now ready to send \$300 to pay this debt.

It has occurred to me since receiving the notices regarding the endowment fund for Technology, that perhaps this money might help a little better by contributing it to the fund. I am writing to ask you for advice. If you think my first duty is to pay my debt, I will send it to the proper person. If you say to give it to the endowment fund, I will send it at once, as part of my pledge.

I should be glad to know, also, the name of the scholarship from which I received help, and the name of the founder.

I think some students in their twenties sometimes accept, as a matter of course, help and kindness and privileges which they do not fully appreciate until they reach their forties; and so, perhaps at this late day I may send back my gratitude for all that was done for me by so many in the Biological Laboratory, and for which I don't believe I ever thanked any one when I was there."

With no small amount of satisfaction I sent a copy of this letter, omitting of course heading and signature, to my kind friend who had expressed his mind so freely in the letter quoted above, and from him received in reply the following:

"November 7, 1919.

Your Tech student has sent me his note for the money loaned and has also written me a very proper letter of thanks.

It was rather a strange coincidence that you should have got a letter on the same matter from a student of many years ago. There is a great deal of truth in what he says of a youth of twenty not really appreciating help until he has got along further in years.

Thanking you for your pleasant note, I am,
Yours very truly."

It is hardly necessary to comment upon this correspondence and I may conclude by saying that other friends responded to my appeal with similar generosity and without special comment, so that my young friend is provided for for the present year. Best of all, perhaps, is the fact that I have since learned that my contrite correspondent, who volunteered to return with interest the scholarship money received twenty years ago, has since contributed that sum of \$300, and with it as much more, to the endowment fund!

There follows Dr. MacLaurin's comment:

"December 26, 1919.

Dear Professor Sedgwick:

I am much interested in your article about loans to students. I have looked into this matter for a number of years and have always been surprised at the readiness with which men forget their obligations in re-paying loan funds. I find from discussion with representatives of

other colleges that our experience is in no way peculiar. I wish that the general trend were otherwise, as, if it were, educational institutions could afford to be far more liberal in aiding students who really need help.

Yours sincerely,
(Signed) RICHARD C. MACLAURIN."

TECH ARCHITECT A PRIZE DRAMATIST

'99 man wins prize offered Harvard playwrights

THOMAS P. ROBINSON, '99, an architect of Boston, has won the annual prize offered by Oliver Moresco, a theatrical producer of New York, to members of Harvard's class in playwriting, the "47 Workshop." Mr. Robinson studied the art at Harvard under Professor G. P. Baker, the best-known teacher of dramatic technique in America. The winning play is "The Copy," a character comedy. The prize of \$500 carries with it a promise of a Broadway production within six months.

"I have always been interested in playwriting and I am fond of the theatre," says Mr. Robinson. He has written two plays, "The Hunchbuckle" and "The Rebound" and a number of articles relating to his profession, but no fiction.

Mr. Robinson is one of the designers of the firm of Derby and Robinson, architects of Boston. He is a member of the American Institute of Architects and of the Boston Society of Architecture. He belongs to the Phi Beta Epsilon fraternity and to the Technology Club of New York.

IS TECHNOLOGY BECOMING A GRADUATE SCHOOL ?

Professor Aydelotte's report — the summer school problem

THE increasingly large number of men entering the Institute from other colleges brings to Technology the necessity of offering advanced courses on a more extended scale than ever before, according to a report read to the faculty recently by Professor Frank Aydelotte, chairman of the committee on admissions.

Professor Aydelotte furnished the faculty with figures which show strikingly the increase of transferees at the Institute in the past nine years. The following are the percentage ratios of men who transfer to Technology from other colleges to the men who enter the Institute from secondary schools, since 1912: 1912, 32 per cent; 1913, 34 per cent; 1914, 59 per cent; 1915, 60 per cent; 1916, 71 per cent; 1917, 36 per cent; 1918, 38 per cent; 1919, 85 per cent; 1920, 92 per cent.

Of the total of 982 men admitted to the Institute last fall 445 came from other colleges and 482 from secondary schools, which, as the above figures show, is in the ratio of 92 per cent. There were 39 foreign students entered last fall and 16 former Institute students readmitted to the Institute as freshmen.

For the first time in the history of Technology, the majority of students in school are in the junior and senior classes, a record shown by probably no other institution of learning in the country. Before the opening of the fall term this year the Institute had received 640 applications from men at other colleges for permission to enter Technology. Of this number 445 registered at the opening of school.

The committee pointed out to the faculty in its report that "the result of this proportionally large number of transferees was a serious change in the character of the student body," and continued that "if the proportion continues to increase the Institute will be faced with the proposition of having to offer advanced courses on a more extended scale."

A new entrance requirement was fixed for men who enter in 1922. Those who enter as freshmen at that time will have to present a certificate of the successful completion of a course of 150 hours of chemistry. To offset this requirement, only one elective, instead of two, will have to be presented.

The committee recommended to prospective entrants in 1921 the desirability of a preparatory course in chemistry. The Institute will offer an intensive course in the subject next September for three weeks before the opening of school.

In the future, the fee for entrance examinations will be \$6.

According to figures recently prepared by Walter Humphreys, registrar of the Institute, 34 per cent of those who attended the Institute during the last five years had attended other colleges. According to

the statistics, the average age of Institute alumni is now 38, which is four years older than it was 10 years ago; and whereas the early classes were small, the recent ones are very much larger. Of 2718 considered, 921 had attended other colleges, and 489 had degrees from other colleges.

That business men realize the importance of technical education more than those engaged in other pursuits, is the result of the study of 1466 cases. Of these, the parents of 583 were engaged in business, 197 in professional pursuits, 43 government officials, 30 farmers, 258 were wage-earners and 219 retired or deceased.

Queries, the answers to which are expected to have a bearing on the possible extension of the Institute's summer school, have been addressed to the members of the faculty here by the Administrative Committee in the form of a questionnaire.

The questionnaire sets forth that although the research laboratories in electrical engineering, physical chemistry, applied chemistry, and the new laboratory of industrial physics are now run on nearly a year-round basis, there still remains an opportunity for the furtherance of this work in the summer when the simplified and concentrated schedules find the laboratories freed from their greatest loads.

Regarding the Technology Plan the questionnaire frankly admits that embarrassment was incurred last summer through the absence of so many members of the instructing staff and inconvenience was caused the contractors thereby. The Administrative Committee feels that either the Institute should make an effort to be prepared to do much of this work in the summer and carry on a campaign to encourage their contractors to send in more problems in the summer, or do just the opposite, that is, divert the contractors' work from the summer months to some time when there is a larger staff in residence at the Institute.

The Administrative Committee feels, according to the questionnaire, that Technology has never been able, through press of internal duties to do its share toward offering summer courses to teachers. Whereas Harvard, Chicago, Berkeley and Columbia attract many hundreds of teachers to their summer courses, Technology, while possessing the facilities for giving perhaps better courses in the sciences than any of these universities, has never made an effort to bring them to its doors.

The number of schools offering work twelve months in the year is constantly increasing. Medical schools and other professional schools have adopted this plan to a larger extent than have the colleges of liberal arts. Men studying for the medical profession are now required to have a Bachelor of Arts degree in order to enroll in some of the best medical schools in this country. The number of men taking preliminary work in liberal arts before entering upon their professional studies is rapidly growing, as a glance at statistics here at Technology covering the past three or four years will clearly show. Inasmuch as these men are a little older than the others it is natural that they should desire to obtain their professional degrees as soon as possible and it is largely because of this fact that the twelve-month system is being adopted in a number of schools.

NEW MEMBERS OF THE ALUMNI ASSOCIATION

The following were elected members of the Association by ballot:

Charles Pray Holland, '92	Hymen William Bell, '20
Mabel Warren Sawyer, '94	Edwin Sharp Burdell, '20
George Abram Nichols, '95	Malcolm Sturtevant Burroughs, '20
Charles Boardman, '02	Rolland Webster Case, '20
Frank Gilbert Babcock, '03	Raymond Edward Davis, '20
Henry Clinton McRae, '07	Paul H. Duncan, '20
James Burleigh Cheney, '11	Elmer Philip Grismer, '20
Edward Osgood Upham, '13	Willis C. Luce, '20
Wilson Culver Broga, '14	John Joseph Lyons, '20
Joaquin Ramirez Masferrer, '14	Raymond Emmett McDonald, '20
Arthur Rollin Stubbs, '14	John Gustave McLeod, Jr., '20
Russell Alden Trufant, '14	Stephen Allan Merselis, '20
Vincent Sauchelli, '15	Kenneth Bausman Page, '20
Walter Vinal Reed, '16	Edwin Newell Rich, '20
Christopher Chase Crowell, '17	William Hugh Rowe, Jr., '20
Neal Everett Tourtellotte, '17	Philip Goodenow Rust, '20
Charles T. Barnard, '18	Frederick Malcolm Stokes, '20
Sanford Carlisle Lyons, '18	Philip Everett Wait, '20
Arthur Henry Blake, '19	Elbridge Wason, '20
Herman A. Herzog, '19	Ralph Bickerstaff Webber, '20
Mary Almy, '20	Frank Day Wilcox, '20
	Walter Cromwell Wood, '20

ADDRESSES WANTED

Mail has been returned to the Alumni Office for the following Former Students. Information is desired concerning these people, that they may be kept on the mailing list.

WALTER HUMPHREYS, *Secretary.*

<i>Name</i>	<i>Class</i>	<i>Last Known Address</i>
Benjamin R. Tucker	'74	120 Broadway, New York, N. Y.
Arthur H. Gould	'91	203 Vaughan Street, Portland, Me.
Morris L. Schwarz	'93	255 West 73d Street, New York, N. Y.
William D. McJennett	'94	29 Charles Street, New York, N. Y.
James W. McIntosh	'00	Holden, Mass.
Leslie E. Merrill	'01	Pittsburgh Valve and Fittings Co., Barberton, Ohio
Harold H. Davis	'02	195 Broadway, New York, N. Y.
William J. Bay	'03	Bureau of Construction and Repair, Navy Department, Washington, D. C.
Harry H. Cerf	'04	Y. M. C. A. Building, Duluth, Minn.
Minnie A. Graham	'04	General Chemical Co., 25 Broad Street, New York, N. Y.
Joseph F. Haley	'05	134 Dorchester Street, South Boston, Mass.
Isadore Niditch	'05	10 Castlegate Road, Dorchester, Mass.
Karl F. Juengling	'06	14213 Detroit Avenue, Lakewood, Ohio.
Louis F. Mesmer	'06	231 Marsh-Strong Building, Los Angeles, Cal.
Alice F. Walmsley	'09	70 Concord Street, Framingham, Mass.
William R. Howell	'10	147 Magnolia Street, Roxbury, Mass.
Edward F. Kelley	'10	73 School Street, Cambridge, Mass.
Ralph S. Famon	'11	13 Bigelow Street, Cambridge, Mass.
A. H. E. Kaufman	'11	185 Princeton Street, Lowell, Mass.
Edward Kennedy	'11	169 Beech Street, Holyoke, Mass.
Edward I. Weisberg	'11	90 Pearl Street, Somerville, Mass.
George B. Wilbur	'11	330 Waltham Street, West Newton, Mass.
Raymond O. Elcock	'13	Care of Giant Cement Co., Egypt, Pa.
Henry G. Hauck	'13	99 Meserole Avenue, Brooklyn, Mass.
Matthew Harrison	'14	300 Washington Street, Winchester, Va.
Sarkis M. Bagdoyan	'15	17 Dana Street, Cambridge, Mass.
Francis F. Fulton	'15	21 West Eighth Street, New York, N. Y.
Marion W. Hulse	'15	503 Central Building, Seattle, Wash.
Guy H. Ramsdell	'15	West Lubec, Me.
Frank L. Surls	'15	5 Winchester Street, Brookline, Mass.
Willard C. Brown	'16	Chestertown, N. Y.
Edward E. Freeman	'16	3 Nazing Street, Grove Hall, Mass.
John A. Kelley	'16	107 St. Alphonsus Street, Roxbury, Mass.
Harry B. Smith	'16	43 Curtis Street, W. Somerville, Mass.
Jacob J. Balyozian	'17	655 Morton Street, Mattapan, Mass.
Franklin C. Dexter	'17	129 Dean Road, Brookline, Mass.
Alfred S. Lavoix	'17	66 Fremont Street, Winthrop, Mass.
Joseph L. Cordova	'18	Care of Calle Oriente 28, Guatemala City, Guatemala.
Victor L. Hafner	'18	3 West 69th Street, New York, N. Y.
Paul J. Kellaher	'18	85 Hamilton Street, Dorchester, Mass.
Joseph J. McKeon	'18	434 South Pacific Avenue, Pittsburgh, Pa.
Arthur E. Quimby	'18	90 Westford Street, Lowell, Mass.
Albert F. Sawyer	'18	Islington, Mass.

<i>Name</i>	<i>Class</i>	<i>Last Known Address</i>
Jere H. Cook	'19	Hotel Rio Vista, Rio Vista, Cal.
Harry A. Kuljian	'19	P. O. Box 496, East Liberty Station, Pittsburgh, Pennsylvania.
Sung-sing Kwan	'19	536 Commonwealth Avenue, Boston, Mass.
Harold H. Murphie	'19	102 Talbot Avenue, Dorchester, Mass.
Arklay S. Richards	'19	512 West 114th Street, New York, N. Y.
Benjamin H. Sherman	'19	Colonial Hotel, Penns Grove, N. J.
Leon I. Snow	'19	South Middleton, Mass.
Ki Kee Chun	'20	Kiukiang Road, Shanghai, China.
Homo J. Kjaer	'20	63 Spring Park Avenue, Jamaica Plain, Mass.
Kai Fook Mok	'20	Hong Kong, China.

IN THE PUBLIC EYE

A modernized version, by DR. MORTIMER FRANK, '97, of a famous book, Choulant's "History of Anatomic Illustration" has just been issued by the University Press for a committee of twenty prominent physicians and surgeons in the United States. They have selected this volume as a fitting memorial to Dr. Frank, who died in 1919, soon after finishing his task. He not only translated the volume but added greatly to its value by new sections and many new illustrations. From the *University Record* (*University of Chicago*), January, 1921.

BERTRAND L. JOHNSON '05, has been designated as the head of the division of foreign mineral resources of the United States Geological Survey. For the last two years Mr. Johnson has been intensively engaged in a study of foreign mineral deposits. For the last eight months he has been the acting head of the division. Prior to the entry of the United States into the world war no particular effort had been made by the Geological Survey to compile data on the mineral resources of other countries. The war brought out the absolute necessity of having accurate knowledge of this character. Just before this country entered the war, work along this line was begun under the immediate direction of J. B. Umpleby. Following Mr. Umpleby's resignation, the work was taken over for a short time by Eugene Stebbinger. Mr. Stebbinger was called upon to take up some important oil work, and since that time Mr. Johnson with the aid of a number of assistants, has been adding to the rather pretentious nucleus which was obtained during the war. It is intended to allot enough money to this research to make it possible to keep the domestic mining industry well advised as to mining activities throughout the world. Work on a considerable scale is to be done at once to gather this data.

In addition to the collection and analysis of information on the geology and mineral resources of foreign countries, the section undertakes to disseminate this information where it will be most helpful to American industry. One of the great advantages which the section enjoys is an arrangement with other departments of the Government through which all official figures compiled by foreign governments are made available.

Current foreign literature covering all activities of mining interest is scant, and pertinent items are filed. Nearly 20,000 such items are now available. They are filed by countries and by commodities. The section conducts a considerable correspondence with the mining interests of this country.

Mr. Johnson was born in Boston. His early education was obtained at the public schools of Stoneham, Mass. Later he entered the Massachusetts Institute of Technology, from which he graduated as a min-

ing engineer in 1905. Immediately thereafter he accepted service with the Geological Survey. His first work was in the division of underground water resources. Later he was assigned to geologic mapping in the coal fields of Wyoming. From 1909 to 1917 he did geologic work in Alaska. During Mr Johnson's Alaskan research he discovered chalmersite (CuFeS_2) in the copper deposits of the Prince William Sound region. It occurred in massive form and in such quantities as to permit its shipment as an ore. The only other known occurrence of this mineral is in the Morro Velho mine, in Brazil. He is also credited with the recognition and sub-division of the Pleistocene terracing in the North Carolina coastal plane. Mr. Johnson is the author of the following publications of the Geological Survey: "Pleistocene Terracing in the North Carolina Coastal Plane;" "Occurrence of Wolframite and Cassiterite in the Gold Placers of Dead Wood Creek and Birch Creek Districts of Alaska;" "Gold Deposits of the Seward-Sunrise Region, Alaska;" "The Port Wells Gold Lode District;" "Mining on Prince William Sound" (1913); "Gold and Copper Deposits of the Valdez District;" "Mining on Prince William Sound" (1914); "Retreat of Barry Glacier;" "Mining on Prince William Sound" (1915); "Occurrence of Chalmersite in Alaska;" "Mining on Prince William Sound" (1916); "Copper Deposits of the Latouche Knight Island District;" "Mining in Central and Northern Kenai Peninsula;" "Mining on Prince William Sound" (1917); "Mineral Resources of Jack Bay and Vicinity;" "Geology and Mineral Resources of Latouche and Knight Island District;" "The Port Valdez and Jack Bay Districts." In addition Mr. Johnson is the joint author of many Survey publications. *Engineering and Mining Journal*, January 1, 1921.

ARTHUR EDWIN KENNELLY, a savant of international reputation, a profound mathematician and an analytical engineer-physicist whose development work is a fundamental contribution to the advancement of electrical science.

The influence that such engineer-physicists as Prof. John A. Fleming and Sir William Thomson (Lord Kelvin) have reflected in British science has been reflected by Dr. A. E. Kennelly in this country. For nearly twenty years he has been professor of electrical engineering at Harvard, and for the past six years has, in addition, served in the same capacity at the Massachusetts Institute of Technology and as director of the research division of its electrical engineering department. With a background of a quarter of a century of practical work as an engineer-physicist, during which time he gained national recognition, he brought to his university work a knowledge and experience which have helped to gain for Harvard and the Massachusetts Institute of Technology the high reputation that their electrical engineering departments now enjoy. As a consulting engineer his services are in wide demand by both private corporations and national engineering bodies.

Like many other pioneers in electrical work, Dr. Kennelly was graduated from the telegraph key into larger fields of service. For ten years

he served consecutively as assistant electrician of the British Eastern Telegraph Company, chief electrician of a cable-laying steamer and senior ship's electrician. Then he became associated with Thomas A. Edison and was his principal electrical assistant at Orange, N. J., from 1887 to 1894, later becoming consulting electrician to the Edison General Electric Company. From 1894 to 1901 he was a member of Houston & Kennelly, consulting engineers, in Philadelphia.

Dr. Kennelly is a savant in the true sense of the word. While his work has not been spectacular from a popular standpoint, it has been of fundamental importance to engineering research. He is a profound mathematician, an analytical engineer-physicist and a lecturer who has the gift of lending clarity to complex subjects. He has been a prolific author of technical papers and books. His contributions to engineering and scientific literature cover a broad range, and the results of his work are widely quoted by other investigators and authors. His earliest contributions were on subjects connected with cable testing and the development of alternating-current theory and dynamo-electric machinery. On practical subjects his discussions on the calculations of networks, investigations covering the phenomena of skin effect in conductors and determinations of the heating of electrical conductors are classics in technical literature. Among the most notable of his original contributions are his application of hyperbolic functions in the analysis of electrical engineering problems and his formulation of the fundamentals underlying radio telegraphy and telephony. During the world war as civilian liaison officer in the Army Signal Corps his opinions and assistance were eagerly sought by high officials of the allied governments on wireless matters and in the co-ordination of scientific methods. He was born at Bombay December 17, 1861 of British parents. — *The Electrical World*.

WILLIAM C. POTTER, '97, newly elected chairman of the board of directors of the Guaranty Trust Company of New York to succeed Alexander J. Hemphill, who died on December 29, was formerly senior vice-president of the Guaranty Trust Company. He will take up his new duties about March 1, withdrawing from membership in the firm of Guggenheim Brothers and from all executive activities in their enterprises with which he has been connected, his intention being to devote all of his time to his duties as chairman of the board of the Guaranty Trust Company.

Mr. Potter was educated as a mining engineer and for fifteen years was active in mining and metallurgical operations and their administration, both in this country and in Mexico.

He was born in Chicago on October 15, 1874, and was graduated from the Massachusetts Institute of Technology in 1897 with a degree of Bachelor of Science in Mining Engineering. From that time on he followed his profession of mine operator in New Mexico, Colorado and Montana until he became general manager of the Guggenheim Exploration Company in Mexico and later general manager of the American

Smelting and Refining Company for Mexico and the Southwest. In 1911 he became president of the Intercontinental Rubber Company and on July 8, 1912, was elected a vice-president of the Guaranty Trust Company and continued there until March 15, 1916, when he resigned to become a member of the firm of Guggenheim Brothers. He continued as a director of the Guaranty Trust Company and member of its executive committee. During the year 1918 Mr. Potter was called to Washington and was appointed chief of the Equipment Division of the Aviation Corps of the United States Army. For his services he was awarded the Distinguished Service Medal and was recently decorated by the Italian Government as a commander of the Order of the Crown.

In addition to membership in the firm of Guggenheim Brothers, Mr. Potter is chairman of the Board of the Kennecott Copper Company, president of the Braden Copper Company and vice-president of the Chile Exploration Company, and on the finance committee of the Utah Copper and Nevada Consolidated Copper Companies, besides being a director in a number of other mining, steamship and industrial companies. — *The Annalist*, January, 1921.

CHARLES WINTHROP SAWYER, '93, was a member of the faculty at Technology from 1902 to 1908. He resigned to become a member of the faculty of the College of the City of New York, and later resigned to enter business. In the spring of 1917 he was brevetted Lieutenant-Colonel of Ordnance. The War Department decided to transfer him to the line, so ordered him to the second Plattsburg Training Camp. Here he received a serious broken leg, yet graduated with honor and was to have received the highest commission given there in the Infantry — that of Major. He served on Headquarters Staff until he had a relapse.

At the end of camp Mr. Sawyer was told that as he could neither run, jump nor ride for such a long time to come, he was disqualified for active service. He was given honorable discharge and advised to return home until the War Department placed him, as he was held on their records. From here he went to Winchester Arms Plant, in New Haven, to do some research work and served as an expert while there. It was said of him:

"Whereas no one man in the world knows everything about firearms, we consider that Mr. Sawyer knows more probably than any other one man, about small arms and ammunition."

After the work at New Haven Mr. Sawyer returned home to work on his book "Our Rifles," while waiting for the War Department to place him. In the fall of 1918, he was told he was needed in the engineering branch of the service, and once more he qualified for active service, this time to be major in engineers. Then the armistice came, so instead of going across, he was notified he was placed on the records in Washington. In "Our Rifles" are the answers to many questions the boys asked while at Plattsburg, officers too, for that matter. It is the only book anywhere that tells about the military rifles used in the World War and that has pictures of them.

A review of "Our Rifles" is published on page 225.

BOOK REVIEWS

GENERAL DESIGN OF WARSHIPS, by COMMANDER WILLIAM HOVGAARD, Professor of Naval Design and Construction, Massachusetts Institute of Technology. Spon and Chamberlain, 120 Liberty Street, New York City. [Reviewed by Professor James R. Jack, Head of Department of Naval Architecture, M. I. T.]

This book has been written not merely as a textbook on general design, but as a unit in a definite series, and therefore it forms a natural sequel to the author's "Modern History of Warships," as well as an introduction to his "Structural Design of Warships," the three volumes thus forming a complete unit.

Beginning with a general consideration of the problem of designing a ship to fulfill given conditions, the arrangement of the chapters follows the sequence usually adopted in working out the design; an arrangement which is of great benefit to students in applying the principles to specific cases.

Chapter II contains a discussion of the absolute size of warships, the arguments for and against large dimensions being considered in an impartial way, and the conclusions logically deduced. When a new design is only required to be an improvement in certain particulars over an existing ship it is possible to determine the elements of the design directly, but in all other cases it is necessary to arrive by successive approximations, of increasing precision, the dominating factor being weight. In the earlier stages this is done by applying the principles of mechanical similitude—a risky process in the hands of the inexperienced—and great care has been exercised in Chapter III by means of formulæ and worked examples to avoid misunderstanding on the part of those using the given methods. The following three chapters discuss the effect of variation of one dimension at a time, the various co-efficients of form, and their influence on stability and trim, with their consequent effect on rolling and pitching, so that the designer may know both the dimensions and form most suitable for his requirements. He may now proceed to construct the lines, and Chapter VII is devoted to this work.

The design has now reached a stage where a revision of the weights and position of center of gravity longitudinally and vertically is necessary and in Chapter VIII this is very clearly dealt with.

The effects of "bilging" on buoyancy and stability are worked out in Chapter IX, both the case in which the free water in the ship is in communication with the sea, and in which it is not, being dealt with by the "lost buoyancy" method. While the former case is necessarily one of "lost buoyancy," the latter is usually worked out as a case of "added weight," the weight of course being mobile, and moving towards the lower side or end as the ship inclines. The author has, however,

worked out a very satisfactory application of the "lost buoyancy" method to this case also and points out the advantage that it has in that the weight and position of the center of gravity remain constants in all the calculations. The discussion is carried into the following chapter where specific problems are considered, and in Chapter XI the lost buoyancy method is applied to the delicate problems of the equilibrium of submarines, especially in the partially submerged condition. The remarks on sub-division are especially good, and the whole chapter is the best treatment of the submarine that the reviewer has seen.

In Chapter XII the buoyancy and stability of troop transports are considered and here the problem is the same as in merchant ships, indeed nearly all the trooping done during the war was done by merchant vessels impressed into the service. The combined inclining and rolling experiment and its applicability as a means of estimating the metacentric height at sea are emphasized and recall the great use the author made of this method when the interned German liners were taken over by the United States Government for trooping purposes, and drawings were not available to enable the height of the metacenter to be calculated, while time did not admit of the lines being lifted in dry dock.

Naval oil tankers are dealt with in Chapter XIII both as regards subdivision and ballasting, the effect of torpedo explosion being investigated from both points of view.

Owing to the vital importance of accuracy in determining the weights, an entire chapter is devoted to the calculations involved, both methods and data are freely given and arranged in a systematic manner. An appendix on the "Integrator" giving the theory of the instrument and its application to ship calculations brings to a close a book, which, while treating its subject in a comprehensive manner, contains no superfluous material and is essentially a practical book for the use of students and other practical people.

JAMES R. JACK.

MODERN HISTORY OF WARSHIPS: Comprising a Discussion of Present Standpoint and Recent War Experiences. By William Hovgaard, Professor of Naval Design and Construction, Massachusetts Institute of Technology. Spon. 42s. net.

Professor Hovgaard, in his latest book, deals with the design of warships, a subject which he had already made his own in an earlier volume issued some five years ago. That work, like the present one, was based on lectures prepared for the course in naval construction at the Massachusetts Institute of Technology, but whereas he then dealt with the structural design of warships, and was purely technical, he now treats his subject from an historical point of view, and, as he discusses the matter in the light of recent war experiences, his volume will be found of more general interest. It is, indeed, extremely timely, seeing that all forms of warship construction are now being subjected to close investigation and discussion, and that in every nation the future design of warships is so much in doubt.

Of the qualifications of Professor Hovgaard to deal with such a

subject it is unnecessary to speak, as he is a recognized authority. Students of naval architecture will remember a little volume which he issued when a lieutenant in the Danish Navy in 1887, and in which he predicted in a very striking manner the future strategical value of the submarine boat, forecasting in many ways the developments in underwater craft which have since come about. His research has manifestly been most painstaking and thorough, and the result is a volume which cannot fail to have a wide circulation and sphere of usefulness.

Professor Hovgaard's aim has been to supply a book in which information obtained from many scattered sources has been brought together in a manner most suitable for those who wish to obtain the facts in an adequate but condensed form. At the same time he supplies a key, as it were, to the works in which a more detailed study can be pursued. He says truly that the constitution of naval forces, and the choice of types of warships, present problems of importance not only to naval constructors and naval officers, but to Government officials, and indeed to administrators and statesmen. Not only, therefore, does he discuss critically the various types of warships from an historical point of view, but he explains the causes — political, military, financial, and technical — which have influenced and directed the evolution. A synopsis of such war experiences as he adds has a direct bearing on naval construction, because it is necessary that the naval architect should study the strategical, tactical, and navigational conditions under which such vessels must operate in time of war. His view is that naval actions, submarine attacks and operations at sea should be regarded as gigantic full-scale experiments which, if rightly interpreted, afford the safest basis for new departures in design. Even naval disasters are described, and the lessons to be learned from them pointed out. In the final chapters of the book, which are of a more technical nature than those which precede them, the history of the development in design and construction of the hull, machinery, ordnance, mines, torpedoes and armour is dealt with, showing the progress in each of these elements which has contributed to the evolution of ships of war. A chapter on naval aircraft has been added, and the author sets forth the probable development of the naval constructor's art in the near future.

Naturally the chapter on battleships is by far the most voluminous, and is preceded by a short review of the circumstances in which steam and iron were introduced for nautical purposes. The author reminds his readers that in the "English Seamanship Manual," published as late as 1860, the statement may be found that "Engines and machinery, liable to many accidents, may fail at any moment, and there is no greater fallacy than to suppose that ships can be navigated on long voyages without masts and sails." Similarly, iron was introduced most reluctantly, and even in 1850, in an official document, the conclusion from certain trials was drawn "that iron cannot be beneficially employed as a material for the construction of vessels of war."

However, the manifest difficulties which gave rise to these objec-

tions were finally surmounted by many technical improvements, and the use of steam and iron soon led to new departures in every branch of warship design. The gradual changes in type of the armoured battleship are dealt with chronologically, and the conditions which influenced the changes are lucidly explained. In the division of this chapter, the type ships of the various nations up to 1905 are first described, and then the advent of the dreadnought and her successors. Reference is made to the complete reform of the Navy which was instituted by Sir John Fisher at this time, and it is claimed that the dreadnought type, or "ideal battleship," as he called it, was first proposed by the Italian Chief Constructor, Vittorio Cuniberti, in an article in *Jane's "Fighting Ships"* in 1903. Yet it should be said that the principle of the all-big-gun ship had been clear to Lord Fisher ever since he was captain of the *Inflexible* at the bombardment of Alexandria over twenty years before that date.

The importance of the recommendations of the special Admiralty Committee on Design of 1904, over which Sir John Fisher presided, and which advised upon many new features, embodying the best type of battleship, is insisted upon. It was in accordance with these recommendations that the dreadnought, larger and more powerful than any battleship previously constructed, was built, and was in a sense an experimental ship. At about this time also in the United States, evolution followed the same lines as in Great Britain, but with a bold and original departure whereby superposed turrets were introduced. Although authorized in the same year as the dreadnought, the Michigan and South Carolina were not launched until 1908, two years later, and when they were finished in 1910 the same principle had been adopted for the British Orion class.

In the same manner, the dreadnought battleships of other nations receive attention. Professor Hovgaard, writing of the war experiences of the later dreadnoughts, refers to the extraordinary vitality of the types. As testifying to the power of resistance to guns and torpedoes, he cites the case of the Marlborough and certain German battleships at the Battle of Jutland. The gruelling experience of the Warspite also demonstrated the resistivity, as he calls it, of modern battleships.

Tracing the evolution of the cruiser class, he shows how this has resulted in the production of two distinct types, the light cruiser and the battlecruiser. He brings out the fact that the light cruiser, when first built, supplied an exact and definite want for such a vessel, but after experience had been gained with her in service it was found that she could fulfill several other duties previously assigned to other types of vessel, and this led to modifications in design. On the other hand, the outcome of the battlecruiser, after fulfilling successfully the purpose for which she was created, has been the forcing, as it were, of her leading features upon the battleship. The author commends the energetic manner in which, thanks to our great engineering and manufacturing resources, the British output of light cruisers was augmented to supply war needs. He also traces, in the battle experiences of these craft, their

combined usefulness and vulnerability. As regards the battlecruiser, he shows how in 1905 he read a paper before the Society of Naval Architects and Marine Engineers in New York, in which was advanced the idea of a battleship-cruiser, and the causes which he believed would lead to this type of vessel being produced. The ideal type thus conceived was put into a design by Cuniberti, but was not at once adopted. In the *Hood*, however, he considers that the evolution of the battleship-cruiser has finally reached the ideal type which he described in 1905. It may be noted that, in regard to the Battle of Jutland, Professor Hovgaard says: "The action, although of gigantic proportions, was but the introduction to a decisive battle, which did not take place on account of the weather conditions, and which could not have ended otherwise than fatal to the German Fleet."

Remarking generally on the war experiences of torpedo craft, he notes that in large sea-going destroyers the gun has now become the primary weapon, while the torpedo is a weapon of opportunity. The ascendancy of surface warships over submarines was, he considers, fully demonstrated during the naval operations. Although also the submarine is an important link in naval defences, the capital ship remains as before, and for some time to come will be, the supreme type of warship for all countries for whom control of the ocean is in certain circumstances a necessity. In future naval architecture, the influence of the mine must be taken into account, and the author supplies an adequate account of its use in the war, in order that this weapon may be seen in its true perspective in relation to other fighting material. Similarly, protection against submarine attack finds its proper place in the volume. The paravane and similar appliances are described, and Professor Hovgaard agrees with other writers on the subject that the destroyer, with its depth charges, is probably the most valuable weapon for offensive defence against the under-water menace. The influence of aircraft in regard to developments in naval architecture and armament is noted, with a description of the principal types of machines. The larger naval warships must, he holds, be supplied with a battery of anti-aircraft guns effective up to an altitude of ten thousand feet.

In his concluding remarks the author sums up the situation. He believes that with the information he has provided it should be possible to trace the curve of evolution for each class of warship which it must follow in the nearest future up to the point where new factors, technical or military, make their appearance and influence the development. He admits, however, that with the existing rapid advance, stimulated by the struggle which has just taken place and creating fresh aspects, it is fairly certain that before long such factors will appear and may alter the course of progress in a manner impossible at present to foretell. As it is, he holds that many actions in the war have demonstrated the enormous value of combined superiority in speed and gun-power. The principle of "the speed-armament gauge," as he calls it, is of paramount importance for battleships, for which he concludes that a speed of over twenty-two knots and heavy guns of over sixteen inches calibre are in-

licated as needful, and, coupled with adequate protection, will necessitate a further advance in displacement. Battlecruisers, he decides, must possess a speed of at least twenty per cent more than that of battleships, so as always to have the "speed gauge" when they go into action against vessels of that class. It is true that he attributes the loss of the *Queen Mary* and *Indefatigable* to imperfect isolation of the turrets from the magazines, and does not refer to what a German naval officer described as the primary cause, viz., that these ships were fighting at a range which, in such circumstances they were designed to avoid. In connection with the suggestion that battleships and battlecruisers should be merged into a new type, a gigantic super-battleship, he holds that this will simply result in the need being again felt for a super-battlecruiser, possessing in a more eminent degree the element of speed. *The London Times Engineering Supplement*.

OUR RIFLES—A HISTORY AND DESCRIPTIONS OF THEIR PLACE IN WAR,
BY CHARLES WINTHROP SAWYER, '93, Boston. [Excerpt from
Boston Transcript, December 11, 1920.]

During the past three or four years several millions of our citizens have become more or less acquainted with the fact that the United States soldiers are, and have been, equipped with the best military rifle in the world. This is not an extravagant claim, for it is borne out by every test to which a military rifle is subjected. In his book, Mr. Sawyer explains fully why the United States has such an excellent weapon of warfare.

Many of our citizens have become more or less acquainted with the more complex and developed forms of the rifle, such as the machine-gun, and the automatic rifle. The next war in which this country may be engaged will find the machine-gun and automatic rifle in extensive use, with a prospect of very many of the automatics being issued to foot troops. That being the case, it ought to be the ambition of the present generation and the younger citizens who will furnish the majority of the army to know more about the weapon with which they will be equipped. Such information they will find in this volume, in which Mr. Sawyer tells the story of the history and evolution of our rifles from 1800 to 1920—a hundred and twenty years of remarkable progress.

In his introductory chapter Mr. Sawyer issues a call to all real American citizens, to consider the rifle for what it was, what it is, and what it is expected to be and do, for much of our future position in the world depends upon what we shall know about our rifles. He then goes on to tell about the various rifles which have existed and have been of service in this country with illustrations from his own large collection, and the collections of other rifle-worshippers.

Mr. Sawyer knows well his subject. He knows a rifle from its inception to its condemnation. His description of the process of manufacture in a modern rifle factory is lucid and instructive. It is not so verbose as the interesting description of the work in the Springfield Armory, written in 1852 by Jacob Abbot, and published in *Harper's*

Magazine. Mr. Sawyer is a rifle engineer, and so his descriptions are correct without being wordy or technical. In fact, all his descriptions and stories of the rifle are told in a delightful manner, conversational and colloquial, so that they are within the understanding of any one, and his books read more like a story, than a description of anything so stubbornly a fact as a firearm. It will make no difference whether the reader is an adventure-loving boy, a romantic girl, an inventor, an historian, a collector, or a rifle-crank, the book will have something that will interest him.

Not the least entertaining is that passage about the establishment of a collection of guns and the creation of a "gun room," for it will appeal to any one who has the soul of a collector. His testimonial to the muzzle-loading rifle will warm the hearts of those old citizens who learned how "To Load and Fire in Nine Times." His look into the future and his sentiments regarding the weapons of warfare of the years to come will be worth reading by any one who thinks he knows all about what will or will not happen. Mr. Sawyer has some pronounced convictions as to future possibilities, and it may be his ideas will become realities if ever conditions of warfare should develop.

An interesting feature of this work is the very complete list of makers of all kinds of rifles, during the century, and more, that Americans have been making better rifles than other people.

COL. J. S. B.

CHEMISTRY AND CIVILIZATION, BY ALLERTON S. CUSHMAN, A.M., Ph.D., Director, Institute of Industrial Research, Inc., Washington, D. C., Ex-Lieutenant-Colonel, Ordnance Department, United States Army. Boston: Richard G. Badger. The Gorham Press. Price \$2.50 net. Pp. 151. [Reviewed by Prof. James F. Norris, Department of Chemistry, Massachusetts Institute of Technology.]

Chemistry in the service of man is the author's theme; and his aim is to tell his story in such a way that it can be read with interest and pleasure by one lacking a technical knowledge of chemistry. To appreciate fully what the science has done in helping to build up our present civilization, it is necessary to understand the significance of the contributions to chemical knowledge made by the early investigators. The author, accordingly, devotes two chapters to a consideration of the discoveries made by the alchemists and by Priestley, Scheele, Cavendish, Davy, Faraday, Liebig, and Pasteur. Emphasis is put upon the part played by Count Rumford in directing the attention of scientists to the importance of utilizing the results of scientific research for the benefit of mankind. This introduction makes it possible to bring out clearly what chemistry has done in furnishing the things required in modern civilization. Many interesting facts are given in regard to the more important chemical industries; soda, sulphuric acid, iron and steel, ceramics, cement, and coal tar dyes and medicinals are discussed in a non-technical manner.

Chemistry and War is the subject of a readable chapter, in which

the fixation of nitrogen, poison gases, the gas mask, and the effect of the war on agricultural chemistry are considered.

The author then looks into the future and sees ahead great developments as the result of the application of the newer knowledge. He tells the story of radium, the theory of Einstein, colloids, helium, the liquefaction of gases, and the arc furnace, and as we follow, we are convinced that the debt of civilization to chemistry in the future will be even greater than in the past.

The book contains a valuable appendix on nitrogen supplies compiled by Carleton H. Wright, Lieutenant-Commander, United States Navy.

NOTES ON WOOD RAT WORK, BY EDWARD R. WARREN, '81, *Journal of Mammalogy*, Vol. I, No. 5, November, 1920.

A reprint of an interesting article fully illustrated with four cuts from photographs dealing with nest building on a large scale of the Colorado mountain rat.

PROBLEMS IN FOREIGN EXCHANGE by MARTIN J. SHUGRUE, Assistant Professor of Economics, Massachusetts Institute of Technology.

A comprehensive grasp of the whole field of foreign exchange transactions can be secured from this clear presentation of the subject. An introduction gives a concise survey of foreign exchange markets and methods. Typical forms used in foreign exchange transactions are given in appendices, and there are illustrations of the tables in use for the simplification of foreign exchange calculations.

NEWS OF THE ALUMNI ASSOCIATIONS

AKRON — THE M. I. T. CLUB OF AKRON, OHIO.— At the annual meeting of the M. I. T. Club of Akron, the following officers were elected for the coming year:

L. G. Odell, '11, president; Malcolm C. Brock, '17, secretary-treasurer. The address of both of these men is Goodyear Tire and Rubber Co., Akron, Ohio.

The retiring officers were J. H. Dunlap, president and F. L. Cook, secretary-treasurer.

We are looking forward to a large get-together with the Cleveland alumni sometime this summer. These parties have always been very successful but there have been none for the past three or four years.—*J. Howard Dunlap, 907 Bloomfield Avenue, Akron, Ohio.*

ATLANTA — ATLANTA ASSOCIATION M. I. T.— After a period of hibernation during the war the Atlanta Association M. I. T. reconstructed itself last fall, revived its weekly luncheons and elected Mr. Frederick W. Hadley, '93, president and Mr. H. C. McLaughlin, '18, secretary. The luncheons are held at twelve-thirty Friday noons at the Ansly Grill, and are as a rule, well attended.

The annual dinner was held on January 25 at the Georgian Terrace with the Hon. Calvin Coolidge and Mrs. Coolidge, Mr. and Mrs. R. H. Stearns of Boston, Governor and Mrs. Hugh Dorsey of Georgia, Dr. K. G. Matheson, president of Georgia Technology, and Mrs. Matheson as guests. Mr. William Rawson Collier, '00, made an excellent toast-master. The chief speaker of the evening was Mr. Hadley. The feature of the decorations was a model of the Technology buildings set in the middle of the speaker's table overlooking a Charles River Basin formed by a large mirror.

The Association has under consideration, among other delightful prospects, a hunting expedition to Bull Sluice to beard the 'possum in his den.—*H. C. McLaughlin, '18, Secretary, 609 Chamber of Commerce, Atlanta, Ga.*

CHICAGO — TECHNOLOGY CLUB OF CHICAGO — The officers of the Technology Club of Chicago recently published a directory of twenty-eight pages, containing a list of its members and their addresses and a list by classes. This directory can be obtained from the secretary and will be useful in locating classmates when visiting that city or vicinity.

The following are news items of interest:

Mr. and Mrs. John L. Shortall, '87, announced the engagement of their daughter Margaret to Franklin Head Perkins of Chicago.

George H. Lukes, '92, superintendent of the Public Service Co. of Northern Illinois, unmarried, died February 18 at the University Club in Evanston. General breakdown followed by brain trouble.

Elmer Grismer, '20, represents the Stewart Manufacturing Co. in Cleveland, Room 419, 942 Prospect Avenue, residence, 2052 East 77th Street. — A. B. Morrill, Sanitary District, Indianapolis. — Herbert S. Eames, somewhere in Framingham, Mass. — M. B. Knox, '20, with Chicago Elevated Railways, residence, 227 North Central Avenue. — R. H. Coombs, '19, residence Riverside, Illinois.

Fifty-five Tech men and seventy Purdue men were addressed by Dean A. A. Potter of Purdue, Tech '03, at a joint dinner February 17. The dean keeps elaborate records to assure round students getting into round holes. — *H. A. Pemberton, Secretary, 732 Monadnock Building, Chicago, Ill.*

CINCINNATI — THE CINCINNATI M. I. T. CLUB. — The Cincinnati Club held its annual dinner, election and bowling party on February 12. Twenty-five men were present. The following officers were elected for the coming year: President, Nathan Ransohoff, '10; vice-president, Prof. A. P. Mathews, '92; secretary, Fred W. Morrill, '07; treasurer, David Davis, '97; executive committee, for three years, H. D. Loring, '07; for two years, W. E. Brotherton, '73; for one year, Charles R. Strong, '11.

After the business meeting, four teams were formed for bowling. The captains were Pugh, '97, Tietig, '98, Lackman, '05, and Strong, '11. Lackman's team proved to be better bowlers or better scorekeepers, for they turned in the high score. — *Fred W. Morrill, Secretary, Care of Ferro Concrete Company, Richmond and Harriett Streets, Cincinnati, Ohio.*

CLEVELAND — TECHNOLOGY CLUB OF NORTHERN OHIO. — The Technology Club of Northern Ohio is now in the process of being revived, and we hope will soon be back into even greater than pre-war activity. The first meeting for some months was held February 18 at the University Club, at which about fifty-five men were present. Col. Leonard P. Ayers, vice-president of The Cleveland Trust Co., and formerly statistician of the American Expeditionary Forces and Peace Conference was the speaker of the evening, and gave a tremendously instructive and absorbing talk on "The Economic History of the United States" during the last hundred years. This was supplemented by some very interesting graphical data. Following the principal address, Colonel Ayers gave the Club members some intimate and illuminating side lights on The Inside Workings of the Peace Conference in Paris.

The following are the present officers of the Technology Club of Northern Ohio: F. B. Richards, '84, president; M. Hellman, '94, vice-president; A. A. Gould, '10, secretary.

We expect to have a meeting in two weeks in honor of our president-elect, Dr. Nichols, who is as you know, at present, a Cleveland. — *Allen A. Gould, University Club, 3813 Euclid Avenue, Cleveland, Ohio.*

DULUTH — TECHNOLOGY CLUB OF LAKE SUPERIOR. — The Lake Superior Technology Club held an enthusiastic dinner meeting Friday evening, March 11 in the Gitchee Gammee Club, Duluth. Besides the

membership from Duluth and Superior, Two Harbors, Crosby and the Iron Range were represented.

In the absence of President S. B. Sheldon, '89, Walter Zimmerman, '98, presided as chairman. Charlie Brewer '02, reviewed the doings of Tech since the previous meeting nearly a year ago. J. A. Noyes '12, spoke at some length on the present plans of the Institute. "The Technology War Record" was reviewed and the volume highly commended. W. C. Lounsbury '04, sketched briefly the work of Professor Sedgwick.

After the meeting a social evening was enjoyed.

A committee of C. D. Steele, '08, and W. C. Lounsbury, '04, was appointed to arrange for the next meeting.—*Charles Brewer, Secretary, Alworth Building, Duluth, Minn.*

FALL RIVER — TECHNOLOGY ASSOCIATION OF FALL RIVER, MASS. — No meeting has been held since the last issue of the REVIEW in January. On the thirty-first of March a dinner meeting is scheduled at the Hotel Mellen and a large attendance is expected. We expect to have as our guests President Metcalf of the Alumni Association and Mr. John F. Stevens, a prominent engineer.

Plans are in progress for a big college club outing at the Fall River Country Club some time in May. There will be a variety of athletic events in which the old and young of the different clubs will compete. A general social and good time will follow in the evening with a dinner. Harvard, Yale, Brown, Williams, Amherst, Holy Cross and other colleges have clubs here and this is the first time a joint affair of this kind has been planned. Of course, our members may not excel in the athletic contests because of the severe competition but they can't keep us from trying.—*L. L. McGrady, Secretary, 123 Beverly Street, Fall River, Mass.*

HARTFORD—TECHNOLOGY CLUB OF HARTFORD. — We are holding our luncheons the second and fourth Thursdays of each month, and they have proved very successful, the average attendance being about twenty-five. We have had some very interesting guests at each luncheon, who have given us one-half hour talks on some scientific subject, sometimes accompanied by demonstrations.

The Club holds its annual meeting and banquet at the Hartford Club, Saturday evening, April 2. — *George W. Baker, Secretary, Box 983, Hartford, Conn.*

MANCHESTER — TECH CLUB OF NEW HAMPSHIRE. — **TENTH ANNUAL SUMMER OUTING:** June 27, 1920, was another red letter day in the annals of the Tech Club of New Hampshire, for on that day the members assembled for their Tenth Summer Outing at the beautiful summer home of their genial president, E. W. Rollins, '71. The outing, the ninth to be held at Three Rivers Farms, was the largest in point of numbers yet held. It is not surprising that this is so, for it is difficult to imagine any one once attending not repeating. The fame of the Tech Club of New Hampshire's summer outing and president and host,

E. W., has spread throughout the land. It is expected that the membership roll of the Club will increase rapidly during the coming years as Tech men move to New Hampshire to be eligible to attend E. W.'s parties. The weather was perfect, clear skies and moderate temperature. E. W. was on the steps, as usual, to greet each man with a smile and a hearty handclasp, together with the directions to register and then proceed to the breakfast room. It is useless to try to express in mere words the full significance of this invitation.

There was at times a note of sadness at the outing owing to the absence of President MacLaurin of the Institute, whose death occurred last January from pneumonia. President MacLaurin was an honored guest at the 1919 outing and those who were present will not soon forget his address of welcome and cheer.

As in past years, tables were spread in the pine woods close to the house and to this spot the party proceeded shortly after two o'clock. The menu consisted of fish chowder, steamed clams, lobsters, sweet potatoes, lamb, ice cream cake and coffee. To use once more the well-worn but still appropriate words of G. B. Lauder of Concord, "It was some feed."

After dinner, the host, Mr. E. W. Rollins, started the speaking by outlining a plan for perpetuating the memory of the late President MacLaurin. Briefly stated, it was to purchase a lot of land near the Institute for an athletic field to be known as the MacLaurin field. He stated that he had outlined this project to a number of the Tech officials and it had been approved. He thought it a good plan for the Tech Club of New Hampshire to start the ball rolling and suggested that each member give ten dollars and get ten other alumni to subscribe \$10. The suggestion of Mr. Rollins regarding the athletic field was unanimously endorsed. Every member present pledged \$10 and three members \$1000 each. It is hoped that \$100,000 can be raised for this purchase. Mr. Rollins closed his remarks by asking Mr. James W. Rollins, '75, of Boston to act as toastmaster. As every one knows who attended this outing, Jim Rollins is a presiding officer par excellence. Other addresses were made by Professor W. H. Walker of M. I. T., Ike Litchfield, '85, Norwin S. Bean, '94, Wallace Hackett of Portsmouth, Professor Taylor of New Hampshire College, Arthur L. Williston, '89, now president of the Wentworth Institute of Boston, Judge John Kivel of Dover, and Ex-Mayor Beckwith of Dover. Our former secretary and "Live Wire," W. D. Davol, '06, led the singing. Any one who knows the enthusiasm and "pep" which Mr. Davol puts into everything he does will know that it was "some singing." Like all such occasions, the end must come and shortly after five o'clock the guests departed, after thanking Mr. Rollins for his great hospitality.

The following were present. *Tech Men:* Thomas C. Pond, Shirley S. Philbrick, Carl A. Hall, W. T. Robertson, F. S. Bradley, Walter M. Africa, J. Edgar Borden, H. Russell Sawyer, W. G. Abbott, Walter D. Davol, N. S. Bean, Andrew Fisher, Norman E. Seavey, S. L. Flanders, Leigh S. Hall, Clarence L. Nutting, E. H. Brownell, C. H. Johnson,

F. W. Goldthwait, Daniel Ricker, L. J. Killion, C. H. Carpenter, G. A. Brown, J. W. Rollins, I. W. Litchfield, Samuel C. Prescott, H. G. Chandler, R. H. Richards, William H. Walker, Everett Morss, H. A. Morss, A. O. Doane, A. L. Williston, C. M. Goodale, Wallace Hackett, E. W. Rollins, Charles F. Stone, Richard A. Hale, Robert F. Pickels, Edward P. Hutchinson, William A. Grover, LeRoy W. Gould, Joseph Beaudette, George W. Hamblet, Charles E. Locke. *Other Men Guests:* G. D. Barrett, Lorenzo Baer, F. W. Taylor, Joel F. Sheppard, Dr. George R. Smith, Charles E. Carlton, John Kivel, Winthrop C. Richmond, Richmond C. Ordway, Fred C. Smalley, F. N. Beckwith, Ashton Rollins, Sherwood Rollins, R. H. Lewellyn, G. Endicott Putnam, Andrew Abbott, George J. Foster, Frederick Foster, Arthur Foster. *Lady Guests:* Mrs. Sherwood Rollins, Mrs. Leonore W. Johns, Miss Barbara Robinson, Mrs. Peggy G. Phinney, Mrs. James W. Rollins, Mrs. William A. Goss, Mrs. J. F. Sheppard, Mrs. Charles E. Carlton, Miss Marjorie Frary, Miss Elizabeth Sawyer, Mrs. William H. Walker, Miss Grace P. Haskell, Miss Millicent Todd, Mrs. LeRoy B. Gould, Mrs. H. A. Morss, Mrs. Sarah S. Putnam.

On Friday evening, March 18, the Tech Club of New Hampshire held its annual meeting and dinner at the Central Plant of the W. H. McElwain Company, Manchester, N. H. After a cafeteria dinner, the meeting was called to order by N. S. Bean, '94, vice-president of the Club. Mr. Bean proceeded at once to introduce Prof. A. T. Robinson of the Institute. Professor Robinson spoke on "Humanizing the College." He described for the benefit of the members present the new courses which were being established at the Institute for the purpose of giving the students contact with the outside world before graduation. He also spoke of the valuable experience and training which the students get from their connection with the *Tech Engineering News* and *Voo Doo*. He described the *Tech Engineering News* as being an engineering paper second to none and cited examples of engineering news which appeared first in this publication. The members were greatly interested to hear Professor Robinson's ideas on this important subject.

Ike Litchfield '85, was the next speaker introduced by the vice-president. He supplemented Professor Robinson's talk by laying stress on the great work which the Professor was doing. He also discussed briefly E. W. Rollins' '71 plan for a MacLaurin Memorial Field. An informal discussion of organization for this undertaking among the alumni in New Hampshire followed. Those present were:

J. L. Arnott, '75; N. S. Bean, '94; G. M. Belcher, '08; P. L. Caldwell, '11; J. C. Chase, '74; W. D. Davol, '06; S. L. Flanders, '74; L. B. Gould, '03; A. O. Roberts, '04; L. A. Thompson, '05; C. R. Shaw, '05; H. R. Perry, '10; H. S. Wonson, '07; H. A. Smith, '11. — *H. A. Smith, Secretary-Treasurer, 12 Pennacook Street, Manchester, N. H.*

NEW BEDFORD — TECHNOLOGY CLUB OF NEW BEDFORD. — The annual dinner of the Tech Club of New Bedford was held at the Wamutta Club on Thursday evening, March 10. President Philip E. Young

presided over a gathering of twenty-five Tech men who listened to a very interesting talk on Technology affairs past and present by Prof. Samuel C. Prescott. One of the features of the dinner was the Tech Club's Hall of Fame, a gallery of caricature pictures of some of the members, commemorating past events of interest to the Club. The pictures were auctioned off after the dinner amid considerable enthusiasm.— *Charles F. Wing, Jr., Secretary, 790 Purchase Street, New Bedford, Mass.*

NEW HAVEN — NEW HAVEN COUNTY TECHNOLOGY CLUB — The mid-winter meeting of the New Haven County Technology Club was held Saturday evening, January 29, at the Clubhouse of the Winchester Repeating Arms Co. Forty-two Tech men sat down to a dinner presided over by H. M. Wilcox, '05, as toastmaster. Later in the evening other facilities of the clubhouse were enjoyed, bowling, pool and trap shooting, according to an excellent program arranged by the entertainment committee, J. D. Robertson, '16, H. P. Shepard, '16, and H. R. Polleys, '17. An important event was the discussion and resolutions passed regarding the increase in numbers of students at the Institute and the fear that the standards of the Institute would be lowered. These resolutions, as prepared by the special sub-committee, A. C. Jewett, A. T. Hopkins and J. S. Gravely for the Club are as follows:

Be it Resolved that the New Haven County Technology Club views with apprehension the increase in number of students at the Institute, fearing that the quality of graduates will be impaired and the standards of the Institute lowered.

Be it further Resolved that a copy of this resolution be sent to the President of the Alumni Association with a request that the Alumni Association take such action as it may deem necessary in the matter; and,

Be it further Resolved that a copy of these resolutions be sent to each local Alumni Association for their consideration.

Through the kindness of the Southern New England Telephone Co. the next meeting will be held at their new central exchange building on Saturday evening, April 9. Mr. John Putnam, '91, will give a brief talk on the subject of "Manufacture of Telephone Service," illustrating his talk by a visit to the New Haven exchange in actual operation. — *Roy L. Parsell, Secretary, 235 Park Street, New Haven, Conn.*

NEW HAVEN COUNTY TECHNOLOGY CLUB
CATALOG OF MEMBERS, MARCH 15, 1921

<i>President,</i>	H. M. WILCOX, '05
<i>Vice-President,</i>	J. C. BRADLEY, '07
<i>Vice-President,</i>	GEORGE NICHOLS, '95
<i>Secretary,</i>	ROY L. PARSELL, '14

RAILROAD GROUP

Anderson, Frederick S.
Cartwright, Kenneth
Dorrance, William T.
Hooker, H. D.

71 Washington Avenue, West Haven
969 Elm Street, New Haven
46 Avon Street, New Haven
846 Orange Street, New Haven

Jones, Wesley T.
Lawton, Maj. Richard W.
Mitchell, Robert W.
Morton, George A.
Rich, R. H.
Sampson, Edward H.
Smith, Converse
Waterman, I. D.
Willey, Dean F.

58 Avon Street, New Haven
681 Orange Street, New Haven
563 Orange Street, New Haven
Hotel Duncan, New Haven
48 Goffe Terrace, New Haven
57 Atwater Street, New Haven
216 Court Street, West Haven
101 Hubinger Street, New Haven
33 Emerson Street, Westville

UNITED STATES RUBBER GROUP

Babcock, F. G.
Boyd, Stuart M.
Emery, A. G.
Goodridge, Maurice E.
Haynes, Charles R.
Hopkins, A. T.
King, Robert J.
Polleys, Herbert R.
Randall, C. J.
Robinson, Burr A.
Rutherford, Eugene W.
Taylor, Edward N.
Taylor, R. R.
Teeson, E. A.
Upham, Edwin O.
Whitcomb, W. H.

Post Office Box 606, New Haven
Post Office Box 606, New Haven
Post Office Box 606, New Haven
Post Office Box 604, New Haven
Post Office Box 606, New Haven
191 Edwards Street, New Haven
Post Office Box 606, New Haven
Winthrop Terrace, 1523 Chapel Street
Cliff Street, Naugatuck
Post Office Box 604, New Haven
235 Lawrence Street, New Haven
48 Goffe Terrace, New Haven
Post Office Box 606, New Haven
Post Office Box 606, New Haven
Post Office Box 606, New Haven
Post Office Box 606, New Haven

WINCHESTER GROUP

Gravely, J. S.
Jermain, Herbert F.
Jewett, Arthur C.
Knox, H. G.
Martinez, John M.
Meriam, M. G.
Otterson, J. E.
Parsell, Roy L.
Pugsley, Edwin
Robertson, J. D.
Sage, W. H., Jr.
Taft, Edgar W.
Walker, A. C.
Wilcox, H. M.
Zaverine, Ignor N.

127 Alden Avenue, Westville
Haddon Hall, Chapel Street, New Haven
410 Whalley Avenue, New Haven
Hotel Duncan, New Haven
68 Lake Place, New Haven
10 West Prospect Street, New Haven
286 Livingston Street, New Haven
235 Park Street, New Haven
77 Everitt Street, New Haven
563 Orange Street, New Haven
411 Temple Street, New Haven
75 Ralston Avenue, Whitneyville
56 Lake Place, New Haven
200 Edgehill Road, New Haven
88 Lake Place, New Haven

YALE GROUP

Beer, Ethan Allan
Laurson, Philip G., Prof.
Winslow, Prof. C. E. A.

Berkley Oval, Yale University, New Haven
Winchester Hall, New Haven
202 Prospect Street, New Haven

GENERAL GROUP

Allen, Edward E.
Chaffee, Joseph G.
Dowst, Henry
Dunlap, Chester
Elton, Herbert C.
Fitzwater, J. N.
Gfroerer, H.
Goodyear, Watson E.
Kingsbury, Frederick J.

167 Norton Street, New Haven
10 St. Ronan Terrace, New Haven
463 Second Avenue, West Haven
Kolynos Co., New Haven
202 Maple Street, New Haven
264 Whalley Avenue, New Haven
548 Orange Street, New Haven
407 Ellsworth Avenue, New Haven
455 Humphrey Street, New Haven

Leathers, W. H.
 Maconi, G. Vincent
 Merriman, T. C.
 Nichols, George
 Perrin, Lester W.
 Pitcher, Floyd J.
 Putnam, John
 Shaw, Herbert G.
 Schneller, George O.
 Shuster, Elmore F.
 Smith, Carroll C.
 Wells, Scott H.
 Yerxa, Ralph B.

Hamden.
 462 Second Avenue, West Haven
 9 Central Avenue, Hamden
 Drawer 13, Yale Station, New Haven
 463 Whitney Avenue, New Haven
 81 Woodbridge Street, New Haven
 214 Elm Street, West Haven
 539 First Avenue, West Haven
 640 Whitney Avenue, New Haven
 95 Avon Street, New Haven
 79 Lake Place, New Haven
 American Steel and Wire Co., New Haven
 165 Division Street, New Haven

OUTSIDE CITY GROUP

Bassett, William H.
 Bassett, William H., Jr.
 Dunn, C. T.
 Farist, Charles H.
 Guilford, Irving M.
 Holbrook, Ralph C.
 Jameson, Arthur
 Miller, Robert A., Jr.
 Pearson, Rev. Philip C.
 Wolfe, Walter

Cheshire
 32 Judson Place, Ansonia
 176 Wakelee Avenue, Ansonia
 Cheshire
 West Cheshire
 Beacon Falls
 Whortleberry Road, Branford
 9 Highland Circle, Naugatuck
 The Green, Naugatuck
 Beacon Falls Rubber Co., Beacon Falls

WATERBURY GROUP

Bradley, John C.
 Camp, Orton P.
 Camp, Roland H.
 Davis, A. L.
 Davis, E. H.
 Gaillard, L. L.
 Goss, Edward O.
 Green, W. P.
 Holmes, Charles L.
 Hauser, Walter S.
 De Lancey, Darragh
 Langley, Arthur H.
 Morgan, Harold L.
 Nickerson, Clarendon
 Northrup, Carl P.
 Purington, F. G.
 Putnam, J. R.
 Smith, Frank G.
 Smith, Tracey
 Sperry, Leavenworth P.
 Suhr, Carl F.
 Tuttle, Edward L.

American Brass Co., Waterbury
 98 Woodlawn Terrace, Waterbury
 98 Woodlawn Terrace, Waterbury
 Post Office Box 1217, Waterbury
 Post Office Box 1217, Waterbury
 27 West Main Street, Waterbury
 117 Pine Street, Waterbury
 13 Plank Road, Waterbury
 65 Pine Street, Waterbury
 879 Watertown Avenue, Waterbury
 52 Pine Street, Waterbury
 253 Columbia Boulevard, Waterbury
 60 Woodside Avenue, Waterbury
 73 Elmwood Avenue, Waterbury
 144 Bank Street, Waterbury
 50 Buckingham Street, Waterbury
 64 Woodside Avenue, Waterbury
 American Brass Co., Waterbury
 42 Coniston Avenue, Waterbury
 160 Buckingham Street, Waterbury
 60 Morningside Avenue, Waterbury
 Waterbury Trust Co., Waterbury

NEW YORK — TECHNOLOGY CLUB OF NEW YORK.—Since the January issue of the REVIEW came out, several smokers have been held at the Club and for the most part have been largely attended. On March 28, Mr. C. N. Holland, chief engineer for the New York Bridge and Tunnel Commission was the speaker, and described most interestingly the work of building the tunnel for vehicular traffic now being constructed under the Hudson between Manhattan and Jersey.

The work of the Board of Governors for the past months, in addi-

tion to regular routine matters, can best be summarized by quoting in full a letter which is being sent out as this issue goes to press to all Tech men in and around New York. The letter speaks for itself and on April 11 it is hoped a large gathering will turn out and that a rousing meeting will be the result.

"For many years, M. I. T. alumni have maintained a Technology Center in New York. It took the form of a Club about twenty years ago and the Technology Club of New York has had a record of achievement for M. I. T.

It is believed that the time has come for a consideration of the past and the present situation and a determination of the future policy of representation of the alumni of M. I. T. in New York.

To accomplish this every Tech man in New York and vicinity is invited to attend a general mass meeting to be held at the Technology Club, April 11, 1921 at 8 P.M. It is hoped that everyone who has ideas on this general subject will come to this meeting. It is not to be a meeting of the Technology Club of New York—it will be a meeting of Technology alumni. It is hoped that out of this meeting may come suggestions and possibly a committee which will go into the whole matter of Technology representation and make a report at a subsequent meeting.

For your information it is only proper to state that the Technology Club of New York has been in such a financial condition up to this time that in fairness to all concerned any such meeting would have been unwise. The Club by careful business management and economy is now in a position where the broad subject of Technology representation in New York can be considered without the reputation of M. I. T. being injured by any future plans.

If the Technology Club is rendering a useful service it should be supported more generally. It may be that some new form of organization would be advisable. If you have any ideas on this subject you are urged to attend this meeting. The suggestions made at this meeting will materially affect the future policy. You are interested in all M. I. T. affairs and can show your interest in no better way than by coming and hearing this matter discussed and expressing your opinion.

In order that the discussion may be restricted and representative of all Tech men, the chairman will not be an officer of the Club. While this meeting is called by the president of the Technology Club, he does not wish it to be a Club meeting. It is to be a general meeting which every Tech man should attend.—*F. P. Montgomery, President.*"

In January, an issue of the Club *Bulletin* made its appearance. Its chief claim for distinction was its long list of "applicants for positions," the absence of a column of "positions available," and the humor cribbed from *Voo Doo*. Outside of these the editor tells us it "wasn't much." Anyhow, we wish to assure him that there was none of that bombastic, sensational stuff which is creeping into much of the journalism of the day and even into some Technology publications where it always sounds like H. E. L.—I.—*E. P. Brooks, 17 Gramercy Park, New York, N. Y.*

NIAGARA FALLS — NIAGARA FALLS TECHNOLOGY CLUB. — On March 14 thirty members of Buffalo and Niagara Falls Clubs met at "Brown's" in Tonawanda. There were fifteen representatives from each city and they all united in enjoying the dinner. The feature of the evening was the story telling of Bill Houck, '93.

President Pollard provided the "smokes."

The bowling contest was close and at the finish each city had two wins to their credit.

Those present from Buffalo were: W. G. Houck, '93; C. A. Houck, '05; Lane, '01; Potter, '92; Patch, '01; A. E. Sampson, '15; R. Sampson; Murdock, '13; Fish, '95; Tucker; Cowper, '05; Hopkins, '11; Spaulding, '05; H. Lockett, '10; Tuttle.

From Niagara Falls: Avery, '18; Blood, '97; Brown, '16; Critchett, '09; Duffett, '11; Flanders, '13; Hinckley, '08; Hyde, '12; Leach, '16; Mangan, '13; MacMullen, '20; Noyes, '90; Pollard, '02; Read, '09; Strader, '96. — *Norman Duffett, Secretary, Care of Union Carbide Co., Niagara Falls, N. Y.*

PHILADELPHIA — TECHNOLOGY CLUB OF PHILADELPHIA. — December 29, the night of the Musical Club concert and dance in Philadelphia, was a landmark in Philadelphia Tech Club activity. About three hundred Tech men and their friends had a regular time. The hall, a very attractive place without any extra decoration, was made even more attractive by about one hundred cornucopias filled with confetti of different colors hanging from above. We intended that these should be unnoticed until a certain time during the dance. Shortly after the music started, however, the red and green strings proved too much of a temptation and the game was up. It did not make much difference though and the rest of the evening we waded through drifts of confetti. The concert given by the Clubs was particularly fine, the Glee Club being most frequently the subject of complimentary remarks. We tried to give the boys a good time during the dance by including the Paul Jones several times. That saved the Committee a lot of worry and anxiety usually caused by having to make so many introductions.

We are still holding our luncheons every week at Wanamaker's and usually have six or seven men present. Our star boarder is L. A. Miller, who, I believe, has only been absent about twice since the luncheons started. D. A. Tutein is a close second and the other regulars include Percy Tillson, president of the Club, C. A. Anderson, B. F. Dodge, the secretary and several others. We wish more of the Tech men from outside would join with us.

Our next meeting will be addressed by Mr. George S. Bliss, Chief of the Weather Bureau of Philadelphia, who will throw many interesting sidelights on how he knows whether it will rain or shine, but why he chooses never to tell us. He will also tell us confidentially whether or not it will be necessary to have rain insurance for our next Field Day. If we remember correctly, the rainfall Field Day last year exceeded by a considerable amount the previous high record.

On Wednesday, March 2, occurred the record-breaking meeting of the Philadelphia Club for the year. The speaker, Mr. Elisha Lee, '92, vice-president of the Pennsylvania Railroad, gave an extremely interesting and enlightening exposition of some of the problems faced by the railroads during these days of reconstruction. Just to prove that the meeting was unusual, it may be said that C. H. Bigelow, '92, for the first time within the secretary's recollection gave up an evening at Lu Lu Temple in order to attend.

On March 22 there will be a special meeting of the Engineers Club and affiliated societies in Witherspoon Hall. William Richard Spillane, financial editor of the *Public Ledger* will speak on "How the Engineer may best capitalize himself." Ladies are invited. Most of those connected in any way with engineers are supremely interested in maximum capitalization of their engineers. Because this meeting comes so near our regular April date, the latter will be omitted.

We are very glad indeed to have with us for a few weeks the Club's representative on the Alumni Council, Mr. C. E. Morrow. The presence of an alumni representative in Philadelphia is an event and we intend to make the most of it by getting him to tell us all the news from the "Old Home Town" at a dinner at the Engineers Clubs next Tuesday.

We hope every Tech man will remember that we lunch every Thursday at Wanamaker's at 12.15 and that out-of-town guests are particularly welcome.—*Marshall B. Dalton, '15, Secretary, 22 South 15th Street, Philadelphia, Pa.*

PROVIDENCE — TECHNOLOGY CLUB OF RHODE ISLAND. — The Technology Club of Rhode Island have appointed William C. Dart, '91, as their representative to the Alumni Council. — *Howard C. Fisher, Secretary, Slater Trust Building, Pawtucket, R. I.*

ROCHESTER — TECHNOLOGY CLUB OF ROCHESTER. — The Technology Club of Rochester had as their guests to a dinner at the University Club during the holidays the undergraduates who returned to their homes in Rochester for Christmas week. There were about twenty undergraduates and about thirty members present. It was a revelation to some of us as to what was going on in Boston and the members thoroughly enjoyed the evening and the opportunity to get in touch with the live bunch of young men who had many interesting stories to tell.

The National Convention of the American Chemical Society will convene in Rochester the last week in April and we would like to meet every Tech man who attends the convention. It is hoped that every Technology man visiting Rochester at this time will get in touch with the local Club. — *J. B. Wells, Secretary, 152 Alameda Street, Rochester, N. Y.*

SAN FRANCISCO — TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA. — A communication from George E. Atkins, '04, states that the present secretary of the Technology Association of Northern California is Paul R. Parker, '03, 507 Montgomery Street, San Francisco, Cal.

ST. LOUIS — TECHNOLOGY CLUB OF ST. LOUIS.— B. F. Thomas, Jr., '13, has recently been elected secretary-treasurer of the Technology Club of St. Louis. His address is United Railways Co., 3869 Park Avenue, St. Louis, Mo.

SCHENECTADY — TECHNOLOGY CLUB OF EASTERN NEW YORK. — The Eastern New York Technology Club has, as usual, held a luncheon on the first Tuesday of each month during the last quarter. At the January luncheon Mr. A. A. Buck, '93, told the Club members of his impressions on economic conditions gained during a recent trip to Europe. On the occasion of the February luncheon, Mr. E. L. Clark, '17, and Mr. N. H. Pai, '20, gave an illustrated talk on China. Slides showing the geographical distribution of Chinese railroads, power plants and colleges were shown, and the desirability of creating a "Tech in China" was discussed.

Prof. G. H. Derry, of Union College, spoke at the March luncheon on "Marxian Socialism and the Russian Revolution." After describing the chain of reasoning employed by Marx in developing his theories, and the adherence of the Russian leaders to the Marxian doctrines, Professor Derry expressed the conviction that the foundation of the present Russian economic condition is the ownership of the land by the peasants. He further ventured to predict that peasant land ownership would continue to be the basic fact of Russian government and that in time the Bolshevik rulers would give way to some form of peasant republic. Professor Derry is an accomplished lecturer and his address aroused much enthusiasm. — *P. L. Alger, Secretary, 305 Rosa Road, Schenectady, N. Y.*

WASHINGTON — WASHINGTON SOCIETY OF THE M. I. T.— The biggest event of the year for the Washington Society of the M. I. T. was the concert and dance given by the Combined Musical Clubs at Rauscher's on December 30. About three hundred and fifty tickets were sold and the affair was a big success, socially, financially and from the standpoint of Tech spirit. Secretary of War Baker and many other notables were present. James A. Tobey, '15, was chairman of the committee in charge and was assisted by J. Boyle, H. N. Calver, C. H. Chatfield, W. C. Dean, P. L. Dougherty, A. E. Hanson, A. M. Holcombe, M. O. Leighton, R. W. Morse, H. C. Morris, O. C. Merrill, C. S. Reed, C. H. M. Roberts, G. A. Ricker, E. W. Rounds, L. S. Simon, G. W. Stose, R. D. MacCart, C. J. McCarthy and W. C. Wilson. The committee worked hard for several months and deserve great credit for the efficient way they functioned.

The annual meeting of the Society was held on January 21 in the auditorium of the American Red Cross. Mr. Leonard Metcalf, president of the Alumni Association gave an inspiring talk on affairs at the Institute. Dr. F. Walker, son of former President Walker was also present and delivered a brief address. The following officers were elected: G. A. Ricker, '86, president; James A. Tobey, '15, vice-presi-

dent; H. N. Calver, '14, secretary; A. E. Hansen, '14, treasurer; H. C. Morris, '00, member of executive committee. C. J. McCarthy, '16, was appointed chairman of the entertainment committee, and W. C. Dean, '00, chairman of the membership committee.

The weekly lunches of the Society continue to draw enthusiastic gatherings every Tuesday at the University Club. Prof. C. H. Peabody, who is stopping in Washington, was the guest of honor on March 8. Tom Huff dropped in on March 15 and other visitors have been with us from time to time.

Brigadier-General William H. Bixby, '71, who has been away from Washington for about three and a half years has returned to this city and is now at 1709 Lanier Place, N. W.—Brigadier-General Logand Feland, '92, U. S. M. C. has been ordered to Washington and is living at the Chastleton.—Samuel Willis, '15, has been sent to Europe for a tour of inspection by the United States Tariff Commission. He expects to be gone for several months.—F. H. Newell, '84, a former president of the Washington Society and formerly president of the American Association of Engineers has returned to Washington and is engaged in consulting engineering.—Brigadier-General D. E. Aultman, '95, has gone from Washington to Camp Dix in New Jersey.

The Society's next meeting is to be held on May 3. At that time Professor Tyler is to be in town and will address the meeting.—*Homer N. Calver, Secretary, American Red Cross, 17th and D Streets, Washington, D.C.*

WORCESTER — TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY. — The Technology Association of Worcester County has come to life again and will hold a meeting on April 9, at the Boston Store Restaurant, Worcester.

The speakers for the evening will be Prof. C. L. Norton, Director, Industrial Co-operation and Research of Massachusetts Institute of Technology and Prof. A. T. Robinson of the Department of English.

Arrangements are being made for a rare good time by the following committee: Albert S. Heywood, '92; W. M. Bassett, '02; L. E. Vaughn, '02; H. L. Robinson, '11; E. P. Whitehead, '20; J. B. Wright, '22. — *L. E. Vaughn, Secretary, 4 Fenimore Road, Worcester, Mass.*

NEWS FROM THE CLASSES

1868

ROBERT H. RICHARDS, *Secretary*, 32 Elliot Street, Jamaica Plain, Mass.

The following is the last letter that I received from George T. Tilden, who died some time subsequent to the writing of this letter. I am sorry that I have not the date of his death. It is such a jolly, enthusiastic letter and represents so well the type of man he was that I thought that perhaps it might go in the *TECHNOLOGY REVIEW* just as it is. Although it was written over two years ago, it is just as fresh and will be just as interesting reading for the members of the Class of '68.

To "Bob Richards," the always valiant and noble well-beloved!

My dear Robert: Do not think that my delay in answering your most entertaining letter was owing to indifference. Quite the contrary, my dear fellow, and I thank you heartily for thus giving me a view of your summer doings and rural surroundings, all of which make me think that you and my good, old pal — your brother Harvey — are leading an ideal existence in these days when so much of the world is wrong end up. Tell Harvey I have cut with my own ax and sawed with my own saw nearly two cords of wood this winter, culled from over-growths of maples, elms, wild cherries, birches, etc., here on my three and a half acres and I am still at it. How's that for a seventy-three year youngster?

Being more dollars in debt than I'm willing to divulge even to myself I haven't much money to contribute to Tech and its many splendid enterprises and up to the last minute I didn't expect to get to the grand rally at the Opera House, but I was there, finally, just in time for a seat in the upper gallery and then I used my opera glasses searchingly on that splendid gathering in the hope of finding *you*, but with your usual modesty you had side-stepped the conspicuous places and I missed you, much to my regret. I had to leave before the end, while the delightful French lieutenant in khaki was telling his inspiring story.

Indefinite Intermission

June 6, 1918.

My dear Robert: Don't tell anybody, but the above (just discovered, much to my chagrin!) was written months ago just after the patriotic gathering in Symphony Hall, and was supposed to have been finished and mailed to you forthwith. Do you ever make such blunders? I find also a half-finished story of my dog, really a soldier boy's dog which is making its home with me while his master is helping keep the Huns out of Milton. Sometime I may complete the story and send it to you, but for the nonce I must let this hasten to you as the lamest and most apologetic recognition of your most interesting and delightful letter.

Hasn't New England shown herself a trump on the Third Liberty Loan? On a little collateral, which I fortunately had, I borrowed money at 5% interest and bought the 4¼% which reduces my income by that much but puffs me up with satisfaction at being, to this limited extent, a junior (very junior) partner in Uncle Sam's business!

When we've filled these hell-hounds full of bullet holes the rest of the world will be able to sleep nights. I tell my military friends they ought to put all of us over sixty-five years of age into the front line trenches for we can pull a trigger and hold firmly a bayonet for the Huns to jump onto — and might save the younger men for something better.

Shamefacedly but sincerely your old friend as always,

GEORGE T. TILDEN.

P.S. You heard, of course, of the death of my classmate, Ernest W. Bowditch, at his home here in Milton. He was a fine man and stood in the front rank as a successful practitioner of his profession as landscape engineer. I had some business dealings with him on the estate of Morris K. Jesup, at Lenox, Mass., while I was architect of his place, "Belvoir Terrace," which commanded a forty-mile view down the Housatonic valley and my respect and friendship for him have been constant.

G. T. T.

Whitney Conant (as we always called him) died on January 31 after a lingering illness, at the Sherman Square Hotel, New York City, where he had lived with his wife for the last seventeen years.

At school in the Class of '68 Whitney was a warm friend of mine, we studied together and did some of our field work together. He and Eli Forbes and I were inseparable in our gymnasium practice. We did the usual parallel bars, horizontal bar, swinging on rings, wall weights, dumb bells and clubs, but Whitney had a special fancy for tumbling, so he got us all over into handsprings forward and backward but excelled us all by getting the forward and back somersault. At the end of our schooling we had some group pictures taken where we postured in pyramids.

After graduating Whitney went to the great school of mines at Freiberg, Saxony, and spent two years there; he became quite proficient in the German language in that time. I visited him there and he showed me many kind attentions. We visited the classrooms in blow-pipe analysis, mining engineering and chemistry together. We went to the concentrating mills and down the mines; when the *steiger* (mine foreman) saw me touch my finger to the mine water on the wall he grabbed my hand and said "gift, gift!" (poison). We visited old workings that had been excavated entirely by hammer and points (*schlegel und eisen*) before the invention of gun-powder 1600 A.D.; we climbed out a thousand feet in a vertical shaft. The *steiger* had regarded me all through as a dummy man who did not know anything, but when I said to him at the end, "vollen sie vieleich rauchen" (perhaps you would like to smoke) and handed him a cigar, he turned round and looked me over from head to foot and from foot to head over and over. I had come to life and was a really truly man with flesh and blood. I had not been in Conant's apartment more than twenty-four hours before he was notified that I must appear before the police; I did so and was asked for my passport and had none; then Whitney had the brilliant idea that I offer him my visiting card, I did so and it was accepted. In the office the big policeman was very severe, but when I met him on the street later in the day he took off his hat in such a profound way, nearly putting it on the ground, I thought I must have changed from being the suppliant to being the great American. We heard the newsboys calling in the streets "Krieg! Krieg!" (war); it was the first announcement of the Franco-Prussian war. The station platform was covered with field cannons ready for shipment.

I cannot remember that Whitney followed mining at all when he returned home, and the period between Freiberg and his taking up the position of secretary of The New Jersey Water Supply Company is missing from my memory. He occupied the latter position for the last seventeen years. He was very happily married and he and his wife lived at the Sherman Square Hotel together for many years. At the time of my typhoid fever (1886) he took great interest and asked for daily bulletins of my condition. We have kept up our friendship with occasional visits to each other and by correspondence. He was a very genial kindly man and will be much missed by his friends.

1870

CHARLES R. CROSS, *Secretary*, 100 Upland Road, Brookline, Mass.

In the latter part of January personal affairs called me to Grand Rapids, Michigan, for a few days. There are not many Technology men in the immediate vicinity of that city, but Mr. Ralph H. Crosby, '07, knowing by chance that I was to be there, interested himself to bring them together to meet me at an informal dinner.

This took place at the homelike and well-appointed house of the Peninsular Club, and to me at least was a highly enjoyable occasion. To welcome me most cordially were eight alumni as follows: L. P. Cody, VI, '92; F. L. Lacaff, IV, '99; L. L. Cayvan, V, '00; R. H. Crosby, VI, '07; A. C. Sloss, VI, '08; H. W. Jackson, IV, '16; C. W. Vickers, IV, '02; J. Fleckenstein, XV, '19.

Most of the Tech men now located near Grand Rapids are naturally from other than the earlier classes. Among those, however, who sent expression of regret at their inability to attend was Walter B. Barrows, VII, '76, who has for many years been professor of Geology at the Michigan Agricultural College, of whom as a student in my earliest years of teaching I have the most pleasant recollections.

The Technology men in the locality having been thus brought together, it was hoped by all that some permanent organization might result.

1874

CHARLES F. READ, *Secretary*, Old State House, Boston, Mass.

The secretary has endeavored to obtain some items of interesting news regarding each member of '74 who is within reach, though not always as successful as he hoped.

Arnott, who is still engaged in consulting work in the "design of dams of absolute stability and in general mill and power plant construction," has become tired of bachelorhood and taken unto himself a wife. It happened about a year ago. Mrs. Arnott was Emily Moore, a direct sixth-generation descendant of Jonathan Moore, a former colonel in the British army, and daughter of John W. Moore of Manchester, author of "Moore's Encyclopedia of Music." — Barrus has resigned from the committee on power test codes, American Society of Mechanical Engineers, with which he has long been associated, and feels greatly relieved. He is very busy on steam engineering work connected with his improvements on the drainage of paper machine dryers which have decided merits and which are being widely adopted. These improvements are also being applied to slashers and dry cans in textile mills. — Blunt is still grinding away in the service of "Uncle Sam," looking after the harbor works in and near Chicago. Interesting problems are developing in that region, in relation to the proposed deep water connection with the Atlantic, and the practically assured barge channel connection with the Gulf through the Sanitary Canal, the "Illinois Waterway" (now being built by the State of Illinois), and the Illinois and Mississippi Rivers. These connections will put Chicago "on the map", and plans are on foot for a vast harbor development to meet the new conditions, in which Chicago will be the logical transfer point. At the annual dinner of the Technology Club of Chicago, held February 17, in which the Purdue alumni joined, the Tech Classes of '73 and '74 received a hearty ovation when their representatives, Leman, '73 and Blunt, '74, responded to the roll call. These were the earliest years represented from either Technology or Purdue, and it was very pleasing to the old-timers to receive such a reception from the youngsters. — Burrison, who retired from active teaching at the Institute some years ago on a "Carnegie," has been devoting himself since that time to travel in the West Indies and the South, to studies in economics and horticulture, and the thousand and one interests and pleasures connected with his home life in West Newton. — Colonel Colt is the active chairman of the board of directors of the United States Rubber Co., and he has held this position during nearly three years past. The company is now capitalized for many millions of dollars, and doing an immense business in all lines of rubber work. They have entered widely and successfully into rubber culture, and are today the leaders in this industry. Colonel Colt is also actively connected with many other interests. — Crosby writes that he has been ill for nearly four years and now is unable to leave his room. He has one son who has been in the Philippine Forestry Service for seven years and another son who is engaged on irrigation in Idaho. A widowed daughter, graduate of Smith College, lives with him. He has our kind remembrance and sympathy. — Eliot (George B.) continues in the real estate business in which he has been successfully engaged for the past 40 years. He has a summer home in Fitzwilliam, N. H., near Keene his native town, and he has recently presented the town of Fitzwilliam the sum of \$5000 in trust, the income of which is to be used for the support of lectures and other educational entertainments, thereby contributing to the pleasure and benefit of the townspeople.

Knight holds a position with the Carnegie Steel Co. at their Clairton Works, where he has been for many years. He writes that the town of Clairton is soon to join two neighboring towns and become a city. Here's hoping he may be its first mayor. — Lamb is engaged in the construction and sale of automatic machinery for use in steel manufacturies which he has successfully developed. The business is carried on under the name of Lamb & Nash Co., with offices in Boston. — Nickerson, who is a member of the Boston City Club, gave the boys who attended the luncheon on February 7 two treats which will ever be remembered. First he signed for the lunches, and second he presented each one with copies of the *Gillette Blade* of 1918 and 1919, a monthly periodical which contains the exceedingly interesting story of his business life from the time he left the Class work in 1874 to the dates noted. It tells of chemical and mechanical work in tanneries, establishment of an assay laboratory in Somerville, a gold mining experience in Georgia, followed by the erection of a sawmill and later a planing mill in the same state. Then came work on elevator improvements, the development of a successful vacuum pump for exhausting the air from electric lamp bulbs and the construction and marketing of the lamp itself.

Afterwards it takes up the invention and successful sale of automatic weighing machines, and finally in 1902 to 1904 the crowning work of his remarkable career, that of the invention and development of processes and machinery for the successful manufacture of the Gillette Safety razor. One has only to take a trip through the extensive factories in South Boston to appreciate the wonderful genius and skill which has brought about these results. This publication also tells of a loan library bearing his name which Nickerson has established at the factory for the benefit of the Gillette operators.

The secretary feels bashful about speaking of himself, but as a matter of record might state that he is making progress on the compilation of the volumes containing the portraits and biographies of the officials connected with Technology since its earliest inception, on which he has been engaged for many months. In connection with the patriotic-hereditary societies of Massachusetts the secretary has recently been re-elected Chairman of the Advisory Committee on "Coöperation in Patriotic Work." — Russ is at present sojourning with his family in St. Augustine, Florida. He is a devoted Elk and during the recent visit of President Harding to St. Augustine he passed a pleasant hour with the latter, who is a brother Elk. — Sampson writes from Helena, Arkansas, that his creosote works on the river front in New Orleans were expropriated by the city for public uses and for the past seven years he has been located in Helena, which is the center of the hardwood manufacturing of this country, where he has continued his research work on the treatment of wood. When the present business depression is over he will actively introduce his specialties for economic uses. He feels as young in his endeavors to do something worth while as he did forty-nine years ago when he left Technology, and still has its spirit. — Stevens says the most interesting events in his life are night and morning when he feels ready for sleep and ready for work. All else is by-play and matter of course. After Stevens left Hartford where he was many years in the banking business, he joined his brothers in New York who are engaged in the cotton yarn industry. — Wetherell writes that it is always pleasant to hear from former classmates in the good old building on Boylston Street. He passes the new buildings in Cambridge almost daily and revives with pleasure the memories of us all.

It is regretted that no recent news has come from Bouve, Brown, Chase, Cunningham, Doane, Eliot (G. T.), Fish, Flanders, Gaylord, Haberstroh, Holbrook, Howard, Leatherbee, Mansfield, Mudge, Robinson, Schwab and Shove, (not forgetting those who are far away), but when last seen or heard from they were one and all loyal and true to '74.

1875

E. A. W. HAMMATT, *Secretary*, South Orleans, Mass.

The thirty-ninth annual meeting and dinner of the Class was held at Young's Hotel on March 4, 1921, at 7 P.M. As Hibbard and Mixer were both in the South, and from other causes a small attendance was anticipated, and as a matter of fact, when dinner was served at seven-thirty but five sat at the table. Bowers, Dorr, Eddy, Hammatt and R. B. Smith were on hand, but Lincoln and Homer, who had been expected, did not show up.

Upon motion, Bowers was elected chairman, and at nine-forty-five he called for the records of the last meeting. These were read by the secretary, and approved as read. The reports of the secretary and treasurer were submitted and accepted. Upon a motion, duly seconded, it was voted that the salary of the secretary be doubled. Upon motion, duly seconded, the secretary was instructed to cast, as the vote of the Class, one ballot for officers for the coming year, and in accordance therewith the following were declared elected: President, Thomas Hibbard; vice-president, S. J. Mixer; secretary-treasurer, E. A. W. Hammatt; executive committee, E. H. Lincoln and G. H. Stoddard.

I note that Abbot E. Slade has been elected president of the Tech Club of Fall River. George H. Eddy, who for so many years has been identified with banking in Fall River, has retired. — W. C. Marion, of whom we have had no news for forty years or more, has been located. He is filling his second term as county engineer at North Yakima, Washington. — Edes is again at San Rafael, Cal. — W. F. Sargent's address is 311 South Scoville Avenue, Oak Park, Ill.

1877

RICHARD A. HALE, *Secretary*, Essex Company, Lawrence, Mass.

The Class of '77, Massachusetts Institute of Technology, held its forty-fourth reunion at the Algonquin Club, Boston, February 22. Charles A. Clarke, president of the Class, was the host and presided at the dinner.

The members present were: Robert D. Andrews, architect, Boston, Mass.; F. H. Bacon of F. H. Bacon & Co., furniture and interior decorators; W. H. Beeching, with Little, Brown & Co., publishers, Cambridge, Mass.; W. B. Bradford, mechanical engineer and designer, Charlestown Navy Yard; George W. Capen, architect, Canton, Mass.; Charles A. Clarke, of Hill, Clarke & Co., machinery supplies, of Boston, Mass.; W. E. Fairbanks, Caryville, Mass.; Linus Faunce, engraving and high-class printing, 51 Franklin Street, Boston, Mass.; R. A. Hale, assistant engineer, Lawrence, Mass.; Charles T. Lawton, superintendent Board of Public Works, New Bedford; A. L. Plimpton, assistant engineer, Boston Elevated Company, Boston, Mass.; F. I. Sherman, civil engineer, West Mansfield, Mass.; B. T. Williston, manager Manning & Moore Co., Boston.

Letters were received from various members who were unable to attend: George Mann, of Little Rock, Ark., wrote regarding his visit east last year at the reunion; F. W. Wood, recently a member of the United States Shipping Board at Hog Island, Philadelphia, sent a letter of greeting and stated that the one hundred and twenty-second and last ship built at the shipyard had its trial trip January 22, 1921. The work of the yard is now all completed and is closed.

It was voted that an outing should be held in June and the matter was left with the secretary and the president.

The following officers were elected, Charles A. Clarke, president; B. T. Williston, vice-president; R. A. Hale, secretary and treasurer.

The Class Association has held annual meetings and reunions every year since 1873, without a break. The attendance has varied from ten to twenty-five with an average of about fourteen members. The annual meeting is held during the latter part of February and a day's outing is usually planned for at commencement time. There were about one hundred and twenty-five members that entered Technology and thirty-two men graduated. The mailing list comprises sixty members.

Among the prominent members of the Class are Prof. C. H. Peabody, of Tech, who has now retired; Prof. George F. Swain, of Harvard Scientific School; Linus Faunce, the author of books on drawing and professor of drawing at Tech for many years; Fred W. Wood, of Baltimore, Md., recently on the Hog Island Shipping Board and George A. Baldwin, vice-president of the American International Corporation and member of Hog Island Shipping Board; Robert Andrews, architect, who has served on commission for State House extension and has recently proposed a war memorial in Connecticut with re-construction of Harvard Bridge as indicated in the Boston *Transcript*.

1878

E. P. COLLIER, *Secretary*, 256 Summer Street, Boston, Mass.

The Class of '78 held its annual meeting Saturday evening, January 15, as the dinner guests of Mrs. Charles M. Baker, the widow of the former president of the Class, at her home, 111 Ivy Street, Brookline. Those present were Bacon, Bradford, Collier, Higgins, Longfellow, Rackemann, Robertson, Rollins, Sargent, Schwamb and Williams.

The evening was very pleasantly spent and the enjoyment of the occasion was heightened during the dinner by the receipt of a telegram from Allbright, in Chicago, sending his greetings and best wishes. Mrs. Baker was, as always, a delightful hostess, and the members of the Class appreciated to the full the wonderful dinner which she gave them and the cordiality of her hospitality.

1879

FRANK G. STANTIAL, *Secretary*, Merrimac Chemical Co., Everett, Mass.

Another active member of the Class of '79 has gone along — Arthur M. Waitt. We all remember the atmosphere of cheerfulness that pervaded the northwest corner of the

old first-year drawing room where Waitt's joyful personality predominated, and the geniality with which as sergeant of Company B he always cared for our enjoyment in all our freshmen military activities. This same spirit has characterized him ever since and is very evident in the following letter received from him last summer:

"June 3, 1920.

My dear Stantial:

I am in receipt of circular of May 20 announcing the dinner of our Class on Monday, June 21 and regret that I will be unable to attend. I send you, however, my check for \$1.00 to cover dues to June, 1921.

I have just arrived home after seven months' absence in Europe and am much distressed to hear through the circular of the sudden deaths of Lane and Miller with whom we had all been so happily associated during the years of our Tech life and during the many years since then. I came very near having my name added to the death list, but for some probably good reason I am still on deck and able to tell the tales of my experiences abroad. On my arrival in Europe at the Hague, Holland, about November 24, I was met with a very cutting reception. For four days after arrival I was put to bed, taken to the hospital, and on December 11 was placed on the operating table and kept there for two hours and ten minutes and my left kidney was removed as the result of a tumor that had, without my knowledge, taken possession and was at the time of my operation causing me to lose blood so rapidly that in four or five days I would have been added to the "has beens." However, due to a most able surgeon, good hospital care, and the devotion of my beloved wife who gave from eight to twelve hours of her time daily with me at the hospital, I have survived, and all my friends say I am looking better than for several years past. I feel quite normal again, although for some months I have had to avoid over strenuous work such as lifting pianos, replacing burst tires on my automobile, and other work of such character. However, I am hoping this summer to be allowed to play a little golf and possibly in the fall to take a somewhat active part in the campaign for a government "of the people, for the people and by the people" and to forever do away with dictatorship in high places in the Government of the United States.

I wish it were possible for me to be with the boys on June 21, but the accumulation of work during my absence and calls in connection with the Connecticut Chamber of Commerce and the preparation of relief legislation for the sorely tried and almost bankrupt trolley line in our State of Connecticut, require every day of my time for the next month or two. I send through you to all the boys my heartiest greetings and good wishes and hope that it may be my good privilege to meet with you in health and strength in 1921. With kindest greetings and all good wishes, I remain,

Very sincerely yours,

(Signed) Arthur M. Waitt."

The story of his career by his son, Weymer H. Waitt, follows:

ARTHUR M. WAITT

Arthur M. Waitt, well-known consulting engineer of New York City, died on November 10, 1920. Mr. Waitt was born in October, 1858, in Boston, Mass. He was educated in the Boston schools and attended the Massachusetts Institute of Technology from which he received his S.B. degree in 1879.

Upon graduation he became connected with the Chicago, Baltimore and Ohio Railroad, leaving that road several years later to become general foreman of the car shops for the Eastern Railroad Co. From 1885 to 1888 he was general foreman of the car department for the same company. In 1888 he became connected with the Boston and Maine Railroad as assistant master car builder and the following year took a position in the same capacity with the Lake Shore and Michigan Southern Railroad. Three years later he became general master car builder for that company and was with them until 1899 when he became superintendent of motive power and rolling stock of the New York Central Railroad. He held this position until 1903, when he resigned to open consulting offices in New York City in which field of work he was engaged until the time of his death.

During the war, however, Mr. Waitt, who held the commission of major, gave up his practice temporarily to organize one of the largest purchasing branches of the Ordnance Department in New York and Hartford. His death was due to overwork in this undertaking into which he entered so wholeheartedly.

During his connection with the New York Central he was made a member of the Electric Traction Commission which planned the electrification of the road from New York to Hamon. He also assisted in the designing of the best locomotives in use at that time, among them the engines of the series 1400 and 2900. He was associated after his retirement from the New York Central with Colonel William J. Wilgus in the appraising of the rolling stock of the Lehigh Valley Railroad. He was an enthusiastic supporter of the automatic train control and a director of the Sprague Safety Control and Signal Corporation.

In 1893 Mr. Waitt was elected president of the Central Railroad Club of Buffalo and in 1895 president of the Western Railroad Club of Chicago. As one of the officers of the Lake Shore and Michigan Southern Railroad, he was a participant in the famous high-speed run of October 24, 1895, from Chicago to Buffalo—a run which, it is believed, has never been equalled. The test started at 3.29 A.M. in Chicago and ended at 11.30 A.M. in Buffalo, a total distance of 510.1 miles, done in eight hours, one minute and seven seconds.

In 1901 Mr. Waitt was elected president of the American Railway Master Mechanics Association. In 1916 he became a member of the Connecticut Assembly and it was he who wrote the automobile laws now in force in that state.

Mr. Waitt was also a member of the Connecticut Chamber of Commerce, the New York Railway Club, the St. Louis Railway Club and the Engineers' Club of New York. He was a thirty-second degree Mason. He became a member of the American Society of Mechanical Engineers in 1893 and held the office of vice-president from 1900-1902.

1881

FRANK H. BRIGGS, *Secretary*, Hotel Puritan, Boston, Mass.

Edward R. Warren published in the *Journal of Mammalogy*, "Notes on Wood Rat Work in Colorado, with Plates." A copy has been received by the secretary and it looks (from the plates) as though Ned was looking for trouble.—George W. Langdon is now lieutenant-colonel, Massachusetts National Guards, with the rank of adjutant general.—Fred P. Kendall is general manager of the Northwestern District, American Can Company, with headquarters at Portland, Oregon.

The secretary, F. H. Briggs, presented to the Boston Athletic Association a trophy for the annual fifty-yard special race. It was won by Loren Murchenson of Chicago, but owing to the fact that he entered as "unattached" the trophy will be held by the Boston Athletic Association until next year.

1882

WALTER B. SNOW, *Secretary*, 60 High Street, Boston, Mass.

The thirty-ninth anniversary dinner of the Class was held at the Engineers Club, Boston, on Friday, February 10. Darrow, French, Herrick, Jenkins, Keyes, Warren, Walker and Snow were present. Considerable time was given to a discussion of the fortieth anniversary next year. The prevailing idea was that the ideal reunion would consist of members and their families and be held at some hotel within easy auto travelling distance of Boston.

There has been so much newspaper criticism of the Federal Board for Vocational Education, of which Munroe is vice-chairman and active director, that it is most gratifying to find in the April issue of *The World's Work* the following frank statement regarding the injustice of the criticisms.

"For carrying on the work of the Federal Board for Vocational Education, Congress has appropriated, since June, 1918, \$129,000,000, and the work of the Board is now progressing rapidly. The criticism leveled at the Board has passed, and in reality never should have been made, for Congress, in its original bill, appropriated only two million dollars and then forgot the matter for more than a year, leaving the Board to bear the brunt of the criticism, but helpless to improve matters. The total expenditures for the

two years from June 27, 1918, to June 30, 1920 amounted to \$34,719,196, whereas for the fiscal year 1921-22 it is estimated that \$78,000,000 will be required — more than twice the amount to be expended in half the time.

So now, with the organization of the offices of the Board completed and funds for the work already appropriated, the retraining of our disabled veterans is well under way. About 1,700 schools and colleges are giving training to disabled men in courses approved by the Federal Board, and more than 8,500 industrial, agricultural, and commercial employing agencies have co-operated with the Board in providing "training on the job." In order to eliminate red tape as much as possible an effort has been made to avoid centralization of control. There is, it is true, a central office of the Board in Washington, but the heads of the fourteen district offices in the country have been given the utmost freedom in deciding on cases in their districts, and each of the 114 subordinate local offices is directly responsible for placing men in training, getting subsistence pay to men in training, and for the follow up work that practically all cases require.

On June 30, 1919, the number of men in training was 3,203, but one year later the number had grown to more than 40,000 and from June 30 to December 1, 1920, 19,000 men were enrolled. Up to December 1, 1920, about 160,000 disabled men had been approved as eligible for training. Of these, 94,000 had been approved under section 2 of the rehabilitation law, which provides tuition and support of the men and their dependents during the time they are learning their new vocation. The remaining 66,000 are eligible without maintenance.

The problems of the wounded men are still far from being solved, but so far as vocational training is concerned their lot has been greatly improved."

Munroe has kept the even tenor of his way while carrying an increasingly heavy load. The magnitude of his present responsibilities is manifest in the figures quoted above.

1883

HARVEY S. CHASE, *Secretary*, 84 State Street, Boston, Mass.

No report has been received from the secretary.

Charles Edward Rich, IV, veteran newspaper man, died March 23, 1921, at his home, 144 Woodruff Avenue, Flatbush, in his sixty-second year. He studied architecture at the Massachusetts Institute of Technology and then engaged in newspaper work in Boston. He went to New York City in 1888 and was at various times connected with the *World*, the old *Morning Journal*, the *Recorder* and the *New York Herald*. At the time of his death he was a member of the staff of the *New York Times Analyst*, of which his son, Endicott G. Rich, is editor. He leaves a wife, another son and mother.

The death of King Upton, who was for a time a member of the Class of '83, occurred on Sunday, February 27. Funeral services were held in Marblehead at the St. Michael's Episcopal Church and were attended by Boston business men, members of the Eastern Corinthian and Boston Yacht Clubs and classmates from the Institute of Technology. Interment was in the King family cemetery at Peabody.

1884

H. W. TYLER, *Secretary*, M. I. T., Cambridge, Mass.

A very welcome letter from Bonillas brings the information that he is settled for the present in Tucson, Arizona, at 604 South Sixth Avenue, with Mrs. Bonillas. He writes: "We have been here since the early part of September and may remain till the end of the year or perhaps longer, depending on conditions in my country, which are far from being as satisfactory as one might wish, with the probability of growing worse as the heterogeneous components of the present regime fall out among themselves, as they are at the present moment. We are not allowed to go back home on account of my having refused to join in throwing down the legitimate constitutional government of Señor Carranza, and having remained faithful and true to the last moment, so we will remain as close to our home town in Nogales, Sonora, as we can, to look after as best we can our interests over there."

A newspaper clipping states that Newell has returned with his family to their Washington home, 1829 Phelps Place.

1886

ARTHUR G. ROBBINS, *Secretary*, M. I. T., Cambridge, Mass.

The following notice has been sent out to each member of the Class regarding our thirty-fifth reunion.

MASSACHUSETTS INSTITUTE TECHNOLOGY

S. M. A. '86 THIRTY-FIFTH REUNION

"Make new friends, but keep the old —

The first are silver; the latter gold."

Richie

Dear Boys and Girls:

June next will be our THIRTY-FIFTH and we must surely make it eclipse all others. To do this will call for the presence of every member of the Class, which is not too much to ask, nor to expect.

Ben Howe has recently been in the East, a business trip to Washington, entailing a hurried return to Los Angeles and back to the Capital in ten days' time — he calls this just a good ride. He sends a letter with a clarion call to you.

"My dear Jim:

Just a line to say that S. M. A. M. I. T. '86 must sure hold the thirty-fifth reunion in 1921.

'K' has a mine in California which is liable at any time now to put him in the big money class. My proposition to him is this: if he hits it in time so that he can attend the reunion in 1921, and make the trip in a private car, I have for myself and family already accepted his invitation to accompany him. I do this so that he may know when his invitation is ready I won't refuse. I have a minute interest in said mine which (if 'K' can get the private car) will enable me, probably, to tip the porter, relieving 'K' of that worry.

The situation is about like this: If either 'K' or I say positively we are going to be there, the other will, too, even if he has to pawn his shirt. I say I am going to be there, so it is up to 'K' to get busy.

When I left New England the call was strong to get back, but as years rolled by it petered out almost entirely, until I met 'K' in San Francisco in 1915. That stimulated the fever again and now that I have trod on old New England soil and inhaled the Yankee air again, the feeling to visit Good Old Boston is stronger than ever and will never be satisfied until I am there.

Now 'K' and I are far away and if we will come across the continent for the BIG EVENT it is a very easy matter for the rest to show up, and we must plan a week of it and make it the GALA EVENT of our lives. We are now all up to and past the half century mark with the uncertainties of mature age, so we must all join in our thirty-fifth reunion, as some of us may not be here for the next.

We made a record for ourselves in Tech and let us prove to them that the friendships of our old days at the Institute are alive, and have a big attendance. We must all get together in 1921.

The rest of you be on the lookout for 'K' and Ben Howe.

I will bring my family and show you fellows some youngsters. Regards, etc. Yours truly, *Ben.*"

Percy Maxim saw Ben for a moment, read what he says:

"THE MAXIM SILENCER COMPANY

81-83 Homestead Avenue,

Hartford, Conn.

"My dear Jim:

You will be very much interested to know that Ben Howe dropped into Hartford the other day, and fortunately I returned from out of town before he had to leave. I saw him and had a very pleasant visit although a very short one. Ben has not changed at all except, of course, he looks older. You would know him instantly were you to pass him in the street. Absolutely the same old Ben Howe of '86.

I also met his very charming wife. She has lots of ginger and Ben is evidently well fixed as far as a life partner is concerned. I also saw his twins, a boy and a girl aged two.

Ben swore that he and Killinger would be at the reunion in 1921. The only reason he did not attend the last reunion was because he had to appear in court in Los Angeles.

Pass this information around to the other fellows of the Class, and do not forget to write to me.

Just think of it Jim, I have a boy who is a Junior at M. I. T. He has brought down several of his classmates to visit us, and I am living all over again the days of '84, '85 and '86. My boy told me that at the first lesson in forging, Lambirth, when he came to the name of Maxim in the roll call, looked up with a twinkle and said that just thirty-four years ago he gave his father his first lesson in forging. The boy was struck dumb, that the old man should have remembered it so accurately. May he never miss a weld!

I hope everything is well with you. With sincere regards to all the boys. Sincerely,
Hiram Percy Maxim.

The boys are going crazy over the reunion. There'll be a letter from "Jerry" in the next issue. We'll try and get "K" to limber up on his war experiences also.

Please write in and register your approval and send a word of greeting to your old classmates.

The Committee wishes all a most happy and prosperous 1921.

OSGOOD, BENSON, GODDARD, SUTHERLAND, BALL, *Committee.*

Fire Headquarters, Bristol Street, Boston

January 31, 1921

1889

WALTER H. KILHAM, *Secretary*, 9 Park Street, Boston, Mass.

Pike has lately been doing good work in analyzing costs of electric service in Philadelphia, Chester and vicinity and showing how important savings can be made. The major is now known as one of the country's most important experts in this line.

Shepard is the author of a new work entitled "Correct Auction" which shows what crack players really do and bares the fallacies of many current customs. Although the secretary is no authority on this subject, it is evident that a little study of this work would serve to put the average player in a new class.

Ed is also interested in re-stocking inland waters with bass and beside playing auction every night for six months in the year he finds time to put in about six weeks on a small farm and then to retire to the woods to fish the balance of the time; all of which looks to the secretary as if he had really solved the problem of living.

The secretary has been to Mexico City again this winter to look after some important construction work and is getting to believe that Mexico is some country. At any rate it is free.

1890

GEORGE L. GILMORE, *Secretary*, Lexington, Mass.

The Milburn Wagon Co., of Toledo, Ohio, of which F. H. Dodge is an official, has opened plants in Toledo to begin work for a twelve-million-dollar order for bodies for the General Motor Oldsmobile division, and deliveries have already commenced. — In December, Charles Hayden was elected a director of the Coca-Cola Company. On Wednesday evening, March 2, Hayden entertained a box party at "Musical Chairs," the musical review that was given by the Junior League of New York at the Waldorf-Astoria. — George E. Hale, our astronomer, has certainly good reason for star gazing, but during the last two years he has been blessed with the arrival of two granddaughters, which certainly will tend to keep him back on earth for a while.

ACTONIAN PRIZE TO DR. HALE — LEADING AMERICAN ASTRONOMER IS GIVEN
NEW HONORS BY ROYAL INSTITUTION OF GREAT BRITAIN

Dr. George Ellery Hale, director of the Mount Wilson Astronomical Observatory near Pasadena, Cal., has been awarded the Actonian prize by the Royal Institution of Great Britain in recognition of his work in studying solar phenomena.

Dr. Hale is regarded by many as America's leading solar physicist. He was granted the Janssen medal by the Astronomical Society of France in 1894 and again in 1917 for important astronomical discoveries. He was born in Chicago in 1868. He received his

collegiate education in Massachusetts Institute of Technology, being graduated there in 1890. While in college he was interested in physics and especially in spectroscopy. He established a private physical laboratory in Chicago in 1888, known as the Kenwood Observatory and carried on a protracted study of solar phenomena, including spectroscopic investigation of the spots, chromosphere and prominences. He invented an instrument known as the spectrohelioscope for photographing prominences around the edge of the sun. This opened a new and wide field of research, and caused the first award of the Jannsen medal. He was awarded, in 1902, the Rumford medal of the American Academy of Science, and in 1903 the Draper medal of the National Academy of Sciences, and in 1904 the gold medal of the Royal Astronomical Society. Honorary membership has been conferred upon him by many foreign societies and he has been given honorary degrees by Yale, Manchester, Oxford and Cambridge universities.

Charles T. Yerkes financed the great Yerkes Observatory of the University of Chicago at Williams Bay, Wis., and Dr. Hale was placed in charge there in 1897, where he remained ten years.

It was decided to erect an observatory on the summit of Mount Wilson in California and Dr. Hale was assigned the task of planning and equipping it. He was placed in charge and has conducted many of his studies and investigations there.

Hale is expected east this Spring for a visit.

Charles W. Sherman has been elected president of the New England Water Works Association for this year.

At the Tech Hoover Dinner, February 16, given by the undergraduates, Billy Poland of the Class was one of the chief speakers. He gave a most interesting talk on the conditions he found abroad, having only returned about a fortnight before. Billy is the youngest bridegroom of the Class, but unfortunately Mrs. Poland was unable to come to Boston with him, so we have not had a chance to meet her as yet. However, Ninety was represented at the dinner, as Burley, Goodwin, and Gilmore were present, to cheer Billy on in the good work he is doing on European Relief work.

Miss Minnie H. Rogers' address is now 19 Milford Street, Boston, Mass. — The death has been reported of Miss Mytton Maury on February 8, 1921. Miss Maury was only with the Class a short time as a Special. — A card was received from Darragh DeLancey in February from Portland, Oregon. He had just returned from a trip to Victoria, and was headed for Frisco, where he is busy with the labor conditions of the Shipping Board, with which he is still connected.

The Tech, January 18, 1921, published the following:

"In recognition of his many contributions to scientific knowledge Dr. Willis R. Whitney, '90, non-resident professor of chemical research and member of the Corporation, was awarded, last week, the Perkin medal, one of the greatest honors in science, given for the highest achievement in applied chemistry. The medal is named after Sir William Perkin, the distinguished British chemist and discoverer of the first process for the manufacture of aniline dyes from coal tar.

Dr. Whitney graduated from the Institute in Course V in 1890 and in 1896 he received his doctor's degree from the University of Leipzig, Germany. He returned to the Institute as assistant instructor in sanitary chemistry and later he became assistant professor of theoretical chemistry. Since 1900 Dr. Whitney is director of the research laboratory of the General Electric Company at Schenectady, N. Y.

The best known work of Dr. Whitney is the perfection of a detector for giving warning of the approach of submarines. This invention was put into use during the latter part of the war at the Nahant station of the United States Navy.

During the war he was a member of the Naval Consulting Board and did much in the development of radio telegraphy and telephony. He made the first radical improvement in the carbon incandescent lamp since its invention by Edison, having invented the metalized filament.

The medal was presented by Dr. Charles F. Chandler for the American Section of the Society of Chemical Industry.

In his address of acceptance of the medal, Dr. Whitney said that one of the greatest advantages in chemical science had been the doubling of the number of available metals and thus making possible the development of valuable alloys. He added: 'Possibly one of the biggest things in chemistry lies in agriculture. It is admitted that we need more and better fertilizers. We now use nearly \$200,000,000 worth annually. It is true that

we have spent many million dollars on nitrate plants. We want synthetic ammonia, and we can get it because, during the war, we were forced to adopt production methods derived from foreign chemical research."

Dr. Whitney is a director of the American Chemical Society of which he was president in 1909. He served as president of the American Electro-Chemical Society in 1912, and he is also connected with the Society for Testing Materials, the American Institute of Mining Engineers, the American Academy of Arts and Sciences, and other scientific organizations."

Another quotation from *The Tech*:

"Of the three men selected to solve the problem of expanding Philadelphia's source of water supply, two are graduates of the Institute. J. Waldo Smith, '86, graduated from the Institute at the age of sixteen, and although now in his sixtieth year is still working hard and is considered one of the ablest water supply engineers in the country. Among his achievements are the building of the big Croton Dam and the development of the great Catskill system which supplies New York City with a large per cent of its water supply."

George W. Fuller, '90, the second member of the committee, is a specialist in the solving of filtration methods, and after the signing of the armistice was sent over to Europe by President Wilson as technical adviser on the water problems of the towns of Northern France. He has also advised Baltimore, Washington, Montreal, New Orleans and many other large cities in this and foreign countries."

At the meeting of the Harvard Union, March 10, under the auspices of the Harvard Liberal Club, Billy Ripley of the Economics Department of the University, introduced Samuel Gompers, who spoke on "The Case of the Closed Shop."

From the *Ledger*, Newark, N. J., January 30, 1921:

"Pierre S. du Pont, whose recent election as president of the General Motors Corporation was of international interest in financial circles, is a member of the du Pont family of Wilmington, Del. He is chairman of the board of directors of E. I. du Pont de Nemours & Co., which was founded in 1802, and for years has been a large manufacturer of explosives and chemical products. His first connection with the company was made in 1890, a short time after leaving the Massachusetts Institute of Technology, from which he was graduated. He became assistant in the black powder department of E. I. du Pont de Nemours & Co., then a partner, and was engaged in the work of the Brandywine factory, which manufactured black blasting, black sporting and brown prismatic powders. Two years afterwards, or in May, 1892, he was transferred to Carney's Point, New Jersey, where the building of a factory had started. This factory was small at the time and was intended for the development of smokeless powders. During his connection with the Carney's Point factory, du Pont smokeless shotgun powder was perfected and the original patent for it was taken out jointly in his name and that of Francis G. du Pont. His duties at that plant were practically equivalent to those of superintendent."

In March, 1899, he left the service of the company and went to Lorain, Ohio, where he was engaged in other business for three years. He returned to Delaware, March 1, 1902, to take up the financial end of the business, which was then reorganized by T. Coleman du Pont, Alfred I. du Pont and Pierre S. du Pont in order to purchase the du Pont interests of the former partnership. In December, 1909, the ill health of T. Coleman du Pont caused him to retire from the active duties of president and Pierre had the title of acting president until December, 1913. In March, 1915, T. Coleman du Pont resigned as president of the company and Pierre S. du Pont was elected in his place. In the spring of 1919 he resigned as president and became chairman of the board of the du Pont Company."

Pierre Samuel du Pont was born in 1870, the son of Lamont and Mary Belin du Pont. He was educated at Lawrence Academy and the Massachusetts Institute of Technology. He married Alice Belin of Scranton, Pa., October 6, 1915.

"Frederic Emerson Harnden, a mining engineer, whose death is reported from El Paso, Texas, was a native of Reading, and the son of Mrs. Mary C. and the late Frederic Harnden. He was fifty-three years of age and a member of the Class of '90, Course V of the Massachusetts Institute of Technology."

After leaving Tech he went to Pueblo, Colorado, where he was connected with the Colorado Fuel and Iron Company, and later he was employed in several of the States of the Southwest and Mexico. For three years, up to last fall, he was in New York with the Phelps-Dodge Company engaged in laboratory work. Following a visit with mem-

bers of his family here during August and September he returned to the Southwest.

Mr. Harnden is survived by his mother, who lives in Boston; a sister, Mrs. John Koren of 503 Audubon Road; and a brother, John M. Harnden, a Boston business man, living at Lynnfield Centre." — *The Boston Transcript*, March 25, 1921.

1891

HENRY A. FISKE, *Secretary*, 275 West Exchange Street, Providence, R. I.

The thirtieth reunion of the Class of '91 will be held at Wianno, Mass., on June 10, 11, and 12. Don't forget the date. Complete information will go to members. Everybody come, and if you see any '91 man, tell him that this will be the best ever. We guarantee your money's worth.

On April 9 at Wianno, the daughter of our happy friend Charlie Garrison, was married to Aristides E. Phontrides, Ph.D., who is teaching Greek at Harvard. Too bad it wasn't postponed to June 10, then we all would be there.

Jim Swan has left the Herreshoff works at Bristol and is manager of the Groton Iron Works at Groton, Conn. — Steve Bowen and Harry Young are slated for a trip to Italy and France this summer. — Will Palmer, Will Wilder, Harry Bradlee, Walter Douglass, Charlie Garrison, George Vaillant and the secretary, had an informal dinner at the University Club, March 21, to discuss plans for the reunion. How would you like a real old-fashioned clambake?

1892

JOHN W. HALL, *Secretary*, 8 Hillside Street, Roxbury, Mass.

No report has been received from the secretary.

The Alumni Association has been advised of the death of George H. Lukes, '92, on February 18, 1921. The following outline of Mr. Lukes' life and achievements, published in the *Public Service Lumen*, was sent in by George B. Jones, '05, president of the Technology Club of Chicago of which Mr. Lukes was an esteemed member.

"Flags on the Company's Station were half masted when George Holt Lukes, general superintendent of the Company died February 18. Funeral services were held February 21, at the University Club, Evanston, where he had made his home. The officers of the Company were the honorary pall bearers, the active pall bearers being Fred B. Jenkins, Ernest A. Edkins, E. W. Lloyd, Robert Elliott, Homer Niesz and J. L. Hecht. Interment was at Racine, Wisconsin.

Mr. Lukes was born in that town December 6, 1869. He graduated from the Massachusetts Institute of Technology, in the Class of 1892. After a course in apprentice engineering at the works of the General Electric Company, at Schenectady, N. Y., he went into the employ of the Chicago Edison Company and in 1896 was made its night operating superintendent. In 1902 he became general superintendent of the North Shore Electric Company. When it and other utility properties were combined in the Public Service Company of Northern Illinois, he was made general superintendent.

He was an electrical engineer of national reputation. He was a member of the Western Society of Engineers, the Chicago Engineers Club, the principal electrical and many technical societies. He found time despite his engrossing official duties to respond to constant invitations from these to join in their counsels. He found time also for the social side of life. Besides his home club, he was a member of the University Club of Chicago and the Glenview Golf Club. He was unmarried.

As general superintendent there necessarily devolved on him a large share of the heavy labor of building and organizing created by the growth of the company. He was a clear headed business man, a clear headed executive, loyal to his ideals, just in the settlements of his claims. The directors of the company adopted a resolution expressing their appreciation of him and copies of this were sent to Mr. Lukes' three brothers. Every district sent a floral emblem. Every person in the general office united as one to send a floral piece. The room proved too small to hold those who attended—friends all, for this man was cast in those elements that inspire respect and affection."

1894

S. C. PRESCOTT, *Secretary, M. I. T., Cambridge, Mass.*

I can strongly recommend all '94 men who happen to visit the Pacific Coast to drop in to see our distinguished representatives, P. H. Coolidge and J. C. Nowell, in their offices at the Telephone Company. The secretary had the good fortune to spend about ten days in Washington, Oregon, and California in January, and recalls with very great pleasure and gratitude the courteous treatment he received at the hands of both the above named gentlemen. It is worth a trip across the continent to spend a couple of hours with either of these fellows and to hear about the pioneer work which they have done in extending the telephonic communication in the western country. The secretary had a wonderful drive with Coolidge through the section comprising Berkeley, Oakland, Alameda and the near-by district, followed by a dinner at his home and an opportunity to meet his charming wife and family.

A day or so later Nowell took me to his home in San Mateo, driving down from San Francisco, and a similar experience was very greatly enjoyed. Both these fellows are so firmly rooted in California that the east no longer pulls strongly as a place of residence, although they both admit that the attractions of the old home are still felt at times. It is a great credit to '94 that two of its members are so directly responsible for the service and development of the telephone in the western third of our country.

While at Seattle a number of Institute men were good enough to have a special dinner for me at the Arctic Club. None of these happened to be classmates, but many were old acquaintances, and for all of us it was an evening of good fellowship and pleasure, with a true Technology spirit pervading, and from my standpoint at least it was exceedingly profitable to receive the suggestions and comments of other Institute men, and it was a great pleasure to report upon the recent events back home. It was my intention to hunt up a number of '94 men in and about Los Angeles, as well as other Institute men of other classes, whom I have known for a long time, but a telegram calling me home somewhat hastily prevented.

Mrs. de Lancey and her husband, D. de Lancey, '90, have recently been touring through Southern California, enjoying the remarkable combination of snow-topped peaks and fruit-laden orange groves.

R. S. Weston was recently elected president of the Boston Society of Civil Engineers a position to which only those who have become eminent in their profession and in the esteem of the members of the Society can hope to attain. This well-deserved honor comes to Weston after twenty years of practical experience in civil and sanitary engineering work, during which time he has carried out many important projects and has used his knowledge wisely for the public welfare. The whole Class will appreciate the honor and join in congratulations to him.

The secretary feels his age when sons of his classmates appear in the classroom. It has been a great pleasure to have in this capacity the son of F. S. Howland. Other '94 men who are represented at the Institute by their sons are Bovey and W. H. Pratt. There are doubtless others whom the secretary does not know. Bovey's son is a graduate of Yale and served in the navy during the war. Pratt's son is one of the youngest students in the Senior Class, and will receive his degree at the age of twenty. It is evident that he takes after his dad.

It may interest certain members of the Class to know that a new course is to be established, dealing with the problems of food engineering, which will be carried on under the general supervision of the secretary. The work in this course is a combination of biology, mechanical engineering, and engineering administration. The first of the food industries which will be represented in this work is undoubtedly the fisheries, which although one of our basic and most fundamental industries, and one on which the livelihood of the colonists in part depended, has strangely enough never received any assistance in this country in the way of courses of special training until the establishment of the College of Fisheries at Washington in 1919. The new course at the Institute, which will be started as an option in the Department of Biology and Public Health, is not exactly parallel with the Washington course, as the problems on the Atlantic and Pacific Coasts are somewhat different in character. By the substitution of the courses in the Department of Biology this work can be made directly applicable to all the food conservation industries and it is believed that it will be popular and useful.

1895

W. C. BRACKETT, *Secretary*, 105 Washington Street, Boston, Mass.

Since the last REVIEW went to press we have delivered quite a number of additional Class Books. The secretary has, however, in his possession a few more and would be glad to know if there are any other men connected with '95 who would like to have them. If so, please send request at once to the secretary.

At the reunion held last year at the River Sea Club, Saybrook, a number of the men suggested that the Class have a week-end outing at this hotel once a year. It is the intention of the Class officers to send out a request within a short time to find out how many men would probably attend such an outing this year. If we find that a sufficient number will come we shall certainly arrange for such a meeting.

At a recent meeting of a group of graduates of Wellesley, Elizabeth F. Fisher (M. I. T. '95) made certain statements regarding the possibility of the disappearance of Cape Cod. Her reasons for such a prophesy are given in an article herewith:

"CAPE COD WILL DISAPPEAR"

Professor Fisher at Wellesley College Predicts Its Extinction Unless a Long Sea Wall is Built to Save It. Early consideration of plans for a great breakwater to extend along the ocean side of Cape Cod, south of Highland Light, was urged today by Miss Elizabeth F. Fisher, professor of geology at Wellesley College. Discussing the problem before a group of graduates at Wellesley, Miss Fisher declared that if artificial obstructions were not placed in the way of the ocean's thrusts Cape Cod was doomed.

Pointing out that the ocean side of the cape once presented a series of irregular headlands, Miss Fisher said that the upward current along the shore from Chatham, together with the direct pounding of the Atlantic, was making rapid strides, in a geological way, toward wearing the land back to a point which eventually would mean the inevitable rush of the ocean into the waters of Cape Cod Bay. The northern end of the cape would thus be cut off, and Provincetown would become little more than a menace to navigation.

Miss Fisher was unwilling to prophesy just how long it would take the ocean to complete its work. 'It all depends,' she said, 'on the degree of intensity of future storms. When the arm of the cape does go, however, it is certain to go quickly. A strong sea wall such as the wall at Galveston, Texas, is the cape's only hope.'

A. P. Sloan, Jr., vice-president of the General Motors Corporation and president of the United Motors Corporation, has been elected a director of the Penn Seaboard Steel Corporation.

John L. Hildreth, Jr., died in Bayonne, New Jersey, on December 3, 1920. He was the eldest son of Dr. John L. Hildreth and the late Achsah B. (Colburn) Hildreth, and the brother of Mrs. Charles E. Barrett and Alfred H. Hildreth. He was a graduate of Dartmouth, 1892, and of Harvard, 1893, and entered Massachusetts Institute of Technology, but on account of sickness was obliged to leave before finishing his course. He was an hydraulic engineer by profession, and his work had been largely in connection with the Boston and New York water supply systems and the Passaic Valley sewer system. During the war he was engaged in construction work for the Government at Port Newark. At the time of his death he was in the service of the Standard Oil Company of New Jersey, at the Bayonne plant. He is survived by a wife and four children.

We have just heard from the secretary of the Institute that one of our old classmates, William Parker Sargent, with whom we had lost touch for many years, has just been located. It seems that his whereabouts became known through the Yale alumni biographer, the information being given her by Mr. Sargent's son. His address is 189 Bowen Street, Providence, R. I.

We have two or three changes in address as follows:

DeNise Burkhalter is at Venice, Fla., temporarily.—M. M. Cannon is now with H. P. Converse & Co. in charge of construction of new bridge at Springfield, of which Fay, Spofford & Thorndike are the engineers.—Major Charles A. Meserve has resigned from the army and is, as we understand, now with the New Hampshire State College.

1896

CHARLES E. LOCKE, *Secretary*, M. I. T., Cambridge, Mass.J. ARNOLD ROCKWELL, *Assistant Secretary*, 24 Garden Street, Cambridge, Mass.

Announcements have been mailed to every man in the Class, asking for a reply in regard to attendance at the twenty-fifth reunion to be held at the Wianno Club, June 17 to 19, 1921, and also in regard to subscription to a twenty-five year Class Book. A fair number of replies have been received but at present writing two-thirds or three-quarters of the Class have not been heard from. It is hoped that this will serve as a reminder that in order to make the necessary arrangements and to know what we can do financially we must hear from more men. The moral is, therefore, for the men who have not replied, "Do it now." Everything points to a successful reunion and it is especially encouraging to note among the names of those who plan to come several men who have not been able to be with us at past reunions.

The question as to support of the Class Book is especially important. It certainly will not be worth while to go to the expense and trouble of issuing a book for about forty men, which represents so far the number who have agreed to subscribe to the book and give it support. "Show signs of life" and tell us if you want the book.

Perhaps one of the most interesting notes that has come into the secretary's hands is in the form of a letter from Reg. Norris to O. C. Hering of New York City. It reads as follows:

"As it is years since any of the old crowd outside of Austin Sperry and Charlie Hyde have seen me it may be of interest to some of my contemporaries to have a brief account of my doings since leaving dear old Tech.

After leaving Tech I went out to California to join my brother and from 1899 to 1912 I was employed in various banks. My last position of the sort was with the International Banking Corporation in San Francisco, where I was note teller from 1902 to 1912. I resigned to go into the bond business with my brother and together we floated the bond issues of the Oakland, Antioch and Eastern Railway, an electric line between San Francisco and Sacramento. During the depression in business in 1913 I left my brother and became a bond salesman for the San Francisco branch of S. W. Straus & Co. of Chicago and stayed with them until I went to the Officers Training Camp in August, 1917. I received a commission as first lieutenant and was sent to the 91st Division at Camp Lewis, Washington. Whilst there ran over to Seattle and renewed acquaintance with Karl Harbaugh whom I had not seen since leaving college. Was sent to France in July, 1918, with the advance party of the 91st Division as Billeting Officer for the 182d Brigade. After the troops had arrived and I had tucked the men away in the quaint villages under my charge in the Haute Marne I went to G. H. Q. to report and was sent back to my regiment. Some one in G. H. Q. found out I had been born in Paris and really knew the language and customs and about two weeks after I had returned to the daily grind of a platoon commander, I was much surprised by receiving orders to proceed to Paris as assistant chief of the American Mission at the French Deuxieme Bureau where I was in charge of counter-espionage work. In May, 1919, I was promoted to a Captaincy and my chief having been transferred to the American Commission to Negotiate Peace, was left in full charge of the American Mission. Of course there were no more spies to catch but we were very busy with Bolshevik and revolutionary agitators. As a result of this work I was decorated by the French and Italian Governments. The Mission closed in August, 1919, and I was transferred to the Hotel Crillon and shortly after demobilized. Here I acted as assistant secretary of the American Delegation on the Organization Committee of the Reparation Commission and when the Reparation Commission actually came into being, upon ratification of the Treaty of Versailles, I was asked to take charge of the bureau for dyestuffs and pharmaceutical products. As such I am an international officer subject to the orders of the Reparation Commission only and entirely independent of the American Delegation.

The bureau I have charge of handles and distributes to the different Allies all the dyestuffs and pharmaceutical products which Germany is called upon to deliver to the Reparation Commission by virtue of annex VI, part VIII of the treaty. Up to date the bureau has handled over 13,000 tons of dyestuffs and pharmaceutical products valued at over 337 million marks.

My plans for the future are very uncertain. Normally the bureau should exist until

1925, when the obligation for Germany to deliver dyes and drugs ceases, but the treaty may be modified. Also if the United States should make a separate peace with Germany I imagine all Americans would be so much disliked that we would all be asked to resign. Already there is enough criticism of President Wilson's withdrawal of our unofficial representation. Too bad that party politics should dim the glorious reputation for unselfishness and generosity which we acquired in the war.

However my work has brought me in contact with all the great manufacturers and consumers of dyes of the world and given me a wonderfully comprehensive view of the world markets and I hope to connect up with some American firm as European representative after my official work is over."

The secretary had a report from Billy Anderson stating that he had seen Joe Bancroft recently and Joe had reported that four or five years ago when he was in Portland, Oregon, he saw W. C. Haseltine who told him that Tom Burnside was in Spokane. Burnside has been lost for a number of years and the secretary is, therefore, following up this clew with the hope that he may be located.

There are a number of classmates for whom we have no address and for the book if it is to be issued, it is very desirable that we get track of these people. Therefore, any information regarding the following will be gratefully received: Frederick W. Andrew, Herbert A. Bolan, Edwin A. Brown, Leander Burnett, Thomas A. Burnside, Manual H. Cadenas, Frank D. Clark, A. Bancker Conant, Percy K. Crocker, Miss Ida M. Curtis, Miss Alice M. Cutter, Carlos A. Diaz, Miss Mary S. Ewing, Robert J. Forsythe, Floyd Frazie, Charles L. Glass, George H. Glass, Edward P. Gould, Charles H. Hall, Harry G. Hamlet, Rudolf Hesse, Carlton R. Hunt, Frank W. Jaques, Graham Jones, Edward C. Lang, Cecil H. Low, Amasa J. Lyall, Edwin C. McClintock, Edwin Moorman, James K. Morgan, Miss Anna L. Nash, Vance C. Osmont, James M. Owen, John Patrick, Fred L. Robbins, Harriet L. Robinson, Francis A. Rosengarten, Earl L. Sanford, Albert C. Smith, Edwin G. Tarr, William W. Thayer, Jr., Charles D. Trumbull, John L. Ware, John Whitmore, Benjamin C. Williams, Roland H. Williams, Miss Alla F. Young.

George Merryweather reports that Charley Hollander was killed late last year in an auto accident. Details are as yet lacking but we hope to have them for the next issue.

Myron L. Fuller has recently returned from travels in the interior of Haiti and has related some very interesting details of a horseback trip to the little known but remarkable ruins of the citadel or fortress of the first ruler of North Haiti, located on the crest of one of the most inaccessible peaks of the north coast. Though reported by explorers as one of the wonders of the western world, it was only through a recent number of the *National Geographic Magazine* that it became known to the general public.

Mr. Fuller, speaking of the trip, says: "From the seaport city of Cape Haitien we rode to Grande Riviere at the end of a short narrow-gauge railroad, where, getting in touch with the American officers in command of the local gendarme post, we secured through their assistance, horses for the trip. The trail first led up a deep gorge between the mountains, through banana and cocoanut groves interspersed with clusters of thatched native huts with their black owners and naked children. Soon the trail began its zigzag up the mountain face, sometimes overlooking the plains with the sea beyond and sometimes following leafy tunnels in the tropical jungle, amongst the trees of which the orange, mango, breadfruit and others were recognized. As the climb continued the trail became narrower, more stony and steeper, until the tiny native horses, scarcely larger than their riders, had all they could do to keep their feet. Yet, wiry and tough, they scrambled on. In places remnants of an ancient roadway, abandoned for more than a century, were encountered, but were now little more than a tumble of displaced boulders which only added to the difficulties of travel. Elsewhere the trail was worn deep into the softer rocks until the stirrups of the riders touched the ground at the sides.

Reaching the first mountain pass at an elevation of about 2000 feet we looked out upon a complex series of ridges over which we made our way for some miles, then began our scramble up the last peak, from which the great fortress looked down, still some 700 feet above us. Trees were now fewer, being largely replaced by tall grass, which met above our heads as we rode on our horses.

The evening clouds which nightly gather about the higher peaks were rapidly gathering, and as we gained the summit at 2700 feet they closed in around us. Through the mist we rode up to an approach like that of a medieval castle entered through the great

iron-studded gate at the foot of the towering walls, and found ourselves in a dark, stone-lined chamber of the long abandoned fort.

The citadel, which is even larger than many of our most modern fortresses, crowns the very crest of one of the highest peaks of the coast, straddling it like a saddle. Its walls which are 16 to 20 feet thick in places, are built of brick made near at hand, but with some imported stone dragged up with great labor. They rise with sheer faces nearly 150 feet and are penetrated by four tiers of gun ports. Within, the vaulted gun chambers aggregate nearly a mile in length and are still manned with heavy iron and bronze cannon up to eleven feet in length. The wooden mounts are crumbling, it is true, but the great guns still point to the plains below and are backed by heaps of 36 to 50-pound iron balls, neatly piled as when the fort was abandoned a hundred years ago. Many of the guns are historic pieces and include English cannon captured by the Spanish or French in the wars of the seventeenth and eighteenth centuries. All were dragged to their present places by man power alone, thousands of impressed negroes being used for the purpose.

The builder of the citadel was Christophe, the first negro president of North Haiti following the successful rebellion of the slaves against their French masters, who began the work in 1804. The architects were French, and are said to have been murdered by Christophe on the completion of their labors to prevent the divulging of the secrets of the edifice. Later the half-mad but powerful and forceful Christophe, who had begun his career as a waiter in Cape Haitien, proclaimed himself king and established a nobility, among whom are said to have been Prince Christmas, the Dukes of Lemonade and Marmalade, and others of equally odd and fanciful titles. All were part negroes, for the first act of independence had been the elimination by the freed slaves of their former French masters by massacre, accompanied by frightful atrocities. Over 30,000 whites were shot, burned, cut to pieces and otherwise eliminated.

In addition to the citadel Christophe began the erection of several palaces, and held royal court up to 1820, when he shot himself when his troops revolted following his illness and paralysis. From that date the fort has been unoccupied, untouched and almost unvisited, while the palaces, likewise abandoned, have become largely hidden in the jungle. The earthquake of 1842 shook some of the superficial structures of the citadel, injured a few of the gun chambers, and caused a fissure in the prow, but in the main the structure stands intact to this day, one of the largest and most imposing ruins of the new world.

Our party clambered over the towering walls and parapets, groped its way through the mysterious passages and dark chambers, and descended into the subterranean treasure vaults in which the remains of crumbling money chests are still to be seen. When darkness put an end to our explorations for the time being we settled down in the old guard room to a supper of fried chicken (we had purchased three for seventy cents), eked out by some horribly hard and dry native bread. To the three Americans and their escort of four, one after another of the natives along the road had attached himself during the climb until the self-appointed retinue constituted ten jet black negroes. These proved very useful in gathering firewood, cutting grass for the horses, etc., but their giant shadows and those of their long, dangerous looking machettes, cast upon the walls by flickering fire, gave us all a decidedly creepy feeling as we tried to woo sleep in our blankets spread on a thin layer of grass laid over the stone flagged floor. This feeling was by no means allayed by our recollections of the atrocities which in days past the fortress had witnessed and which are not infrequent in Haiti even to this day, nor by our knowledge of the strong tendency of the negroes to become bandits on the slightest excuse. It must be admitted that each of us civilians rested with an eye and an ear open, and even our marine officer acknowledged that he listened for an hour to their mysterious whisperings before he concluded it was only country gossip and safe to doze off. Evidently all were peacefully inclined, for we awoke the next morning none the worse for our night in our weird surroundings aside from a general lameness and a few dents attributable to corners of the stone slabs of the floor.

After further explorations of the citadel and its intricate passages, and the photographing of its principal features, we descended the mountain by a new and even worse trail than the one by which we ascended. This took us to Milot, in a valley indenting the mountains below, where we found the ruins of Sans Souci, the finest of the before mentioned palaces of the black king, outrivalling in splendor many of those of European royalty. Though more ruinous than the citadel because of its lighter construction and

more overgrown with vegetation, it still presents a stone staircase and terrace of true magnificence, with pieces of marble statuary set amidst the encroaching jungle.

The trails are both steep and bad, even for mountaintrodden horses or mules, and the tropical heat will prevent foot climbing except for the more hardened travellers, yet if one is interested in ruins of this nature the trip is well worth the effort."

John E. Lonngren does not seem to stay put for more than a few months at a time. He has a permanent address at 472 Crafts Street, West Newton, Mass., but at last reports he was on his way to India on a special job with the Indian Steel Wire Products, Ltd. Jamshedpur, via Tatanagar, B. N. R., Bengal, India.

Welles Partridge called on the secretary, February 15. He is now pastor of the Grace Episcopal Church in South Boston and reports an interesting and successful campaign toward increasing the membership and the value of the church in the community. — Professor Winthrop H. Chenery is now in Boston carrying on some research work at the Boston Public Library. — Butler Ames was in an auto accident on January 25, which fortunately did not result seriously. The following account was taken from the *Boston Transcript* of that date

"General Butler Ames, former Congressman and for a time head of the State Guard, was severely injured in an automobile accident in Woburn today. Mrs. Ames, Mrs. Priscilla Kennard, Miss Elizabeth Kennard, and Joseph A. LeGare, all of Lowell, who were the other occupants of the car, suffered only minor cuts and bruises. Mrs. Kennard received a cut over the right eye. The party was bound from Lowell to Boston, with Mrs. Kennard, the owner of the automobile, driving. On the turn into Lake Avenue, from Arlington Road, near Horn Pond, the car cut across the corner, climbed the sidewalk and struck a pole which stopped it on the edge of a deep gravel pit.

General Ames was thrown through the windshield, sustaining severe lacerations on head and body. A General Electric motor truck, which was passing, took him to the Choate Memorial Hospital, where it was said that his injuries, while painful, were not serious. Other members of the party required only slight treatment. The car was wrecked."

E. C. Hultman as fuel commissioner and general supervisor of the necessities of life in Massachusetts is making a national reputation. The results of his work in Massachusetts are beginning to show in reduced prices for coal in some of the towns where excessive prices have prevailed. His work in Washington was not quite sufficient to gain control of the anthracite industry so as to prevent profiteering and especially the unloading of fire-proof coal on New England following the practice of the producers during the past year or two. Hultman apparently finds the scope of his present work much more commensurate with his ability and ambition than was his former work in connection with the Massachusetts legislature.

Joe Harrington came on to Boston from Chicago on January 17 and spent a few minutes with the secretary, allowing just about time enough to say "Hello" and "Good-by". Joe is still typically busy and there is no question but that he will continue so just as long as his good heart continues to function. He reported that he runs across Poppenhusen occasionally in Chicago and likewise Johnny Putnam. Harrington also reported regarding Avery Coonley whose death in Washington has been previously announced in the Class news. He says:

"Mr. Coonley was a fellow townsman of mine in Riverside, Ill., and I knew him quite well. He was regarded in Riverside as one of the most public-spirited men that ever lived there. When he first came to town, he purchased an entire block of ground and erected thereon a very beautiful and expensive residence. Not only did he beautify that part of town by this kind of a building, but at his own expense he paved the public street in the neighborhood, planted trees, cleared out the river front, and in general spent a lot of money and personal effort in public work not ordinarily expected of the individual. He was always ready to contribute to public and private charities and was known as the one man whom the village could depend upon to take the lead in any matter of civic activities. His death was very greatly regretted by every one. It is impossible for me to give you any further details, as I know only that which is common property."

Harrington likewise enclosed a clipping regarding Dr. Mortimer Frank whose sudden death from a stroke of apoplexy came two years ago. Harrington says that Dr. Frank was known in Chicago as one of the leading oculists. He worked very hard and was very successful, and after his death his office assistant told Harrington that he had a patient list of over 7000, it being his frequent habit to have over 30 office visits during the three

hours that he was at his downtown office. The clipping referred to was a tribute by Morris Fishbein to Frank's translations of Ludwig Choulant's "History and Bibliography of Anatomic Illustration."

"The German edition of this work, published at Leipzig in 1852, is out of print. Since its publication it has been an authority on its subject. Today it retains a pre-eminent position, but numerous additions to the subject by modern writers and Choulant's own notes, not added to the first edition, induced the translator, the late Dr. Mortimer Frank of Chicago, to prepare an English edition to which all the new material might be added. The most untimely death of Dr. Frank in April, 1919, at the early age of forty-four, a great loss to the cause of medical history in this country, prevented also his viewing the published copy of this his greatest work. A committee of his friends has seen the book through the various steps of publication, issuing it as a memorial to its author.

Few persons realize how intimate a connection exists between art and the science of anatomy. During the fifteenth century artists, apothecaries and physicians of northern Italy were members of the same guild, the apothecaries mixing paints for the artistic and pills for the physicians. Long before this time crude anatomic drawings had appeared in the manuscript of various periods. True anatomic art may be said to have begun, however, with the intimate relationships which existed in northern Italy. Thus Leonardo da Vinci assisted the anatomist Della Torre in an anatomic work which the latter intended to publish, making over 750 separate anatomical sketches. An artist is, therefore, the founder of physiological anatomy. However, the Choulant-Frank work not only describes such outstanding figures as these, but also searches out the thousand minor contributors to the art of anatomy and accords them a place in due chronologic order.

The University of Chicago Press presents in this book an excellent example of the publisher's art. Types, headings and spacing are artistic. The 350 illustrations are beautifully printed. The one great fault of the book is its unsystematic arrangement. In several instances the reader cannot be sure whether he is reading a translation of Choulant, an addition by Frank, or a note by some of those who saw the publication through the press. The legends for all of the illustrations are published on several pages just preceding the index which is excessively inconvenient for the reader.

This book is an important one for art and for medical history in America. On its subject it assumes at once the authoritative position occupied throughout the world by the original Choulant. It is safe to say that the Choulant-Frank book will continue its reign until another Mortimer Frank shall carry on as careful a research into the subject."

At the alumni dinner, on January 8, in the Walker Memorial at Technology, there were present E. H. Robinson, Grush, Joe Knight and the secretary. Miss Norris sat at the ladies' table. No special information was extracted except that each agreed to be present at the reunion and to do everything possible to secure the presence of others as well.

1897

CHARLES W. BRADLEE, *Acting Secretary*, 54 Canal Street, Boston, Mass.

It was with great regret that members of the Class learned of the death of Mrs. Allen W. Jackson on February 6, 1921 at her home in Cambridge.

William C. Potter, '97 has been elected chairman of the board of directors of the Guaranty Trust Company, one of the largest banking houses in New York. He has withdrawn from connection with the Guggenheim Brothers and from all the executive activities in the enterprises of that company.

After completing his studies he was engaged for a number of years in mining operations in the west and in Mexico for the Guggenheim Exploration and Mining Company, and for the American Smelting and Refining Company. He became president of the Intercontinental Refining Company in 1911. During the war he held the post of Chief of the Equipment Division of the Army Aviation Corps at Washington. He was awarded the Distinguished Service medal and the Italian government recently decorated him as Commander of the Order of the Crown.

Had Henry E. Worcester's latest addition to his family been twins, more might have been said about it. As it is, he is very proud of this younger son, John Duncan, who, without the Class knowing anything about it, will attain the mature age of one year this month.

The following from the *Havana Post* of January 15, 1921 shows the favorable impression Oswald C. Hering, '97, made upon the citizens of Havana while attending the convention of the Delta Kappa Epsilon Fraternity.

"The last representatives of the Delta Epsilon Fraternity's convention will leave Havana Monday when Oswald C. Hering, chairman of the Board of Directors, leaves for his home in New York. Mr. Hering has been in the city ever since the opening of the convention and has remained behind to attend to various details of the brotherhood.

A fraternity brother of President Menocal, Mr. Hering has conveyed to the citizens of Cuba, to the statesmen of the Republic and to the press of Havana his expressions of gratitude for the welcome which the fraternity met here. Mr. Hering has traveled extensively, but in his own words, 'I have never found a more hospitable community than that which greeted us here.'

Cuba on the other hand will regret to say good-bye to Mr. Hering, who, a prominent architect in New York, has represented in Havana the finest traditions of young American manhood, and throughout the social and business functions of the fraternity here has impressed Cubans and Americans alike with his sportsmanlike views, his loyal Americanism and his unbounded affection for his fellow man.

He has made a wide circle of friends both for himself and his fraternity and has bound Cuba closer than ever to certain parts of the United States. Many invitations have been extended to him to come back to the island which found him and his fellows such jolly good fellows."

And the New York *Herald* of March 3, 1921, tells of his election as president of the Delta Kappa Epsilon.

"In recognition of many years of service upon the council of Delta Kappa Epsilon, Mr. Oswald C. Hering, New York architect, yesterday was elected president of that fraternity. D. K. E. has chapters in forty-three colleges and universities in the United States and Canada and a membership of more than 12,000.

Mr. Hering became a 'Deke' in 1894 while a student at the Massachusetts Institute of Technology. After taking a four year's course in architecture at 'Tech' he spent two years at the Ecole des Beaux Arts in Paris. In the practice of his profession he is best known as an architect of country houses. His latest work is Triltsend, the home of Mr. James M. Cox, who was Democratic candidate for president."

Arthur T. Hopkins wrote the acting secretary recently enclosing a letter from T. C. Atwood, also stating the following news item of interest:

"I addressed the Freshman Class at Technology recently on the subject of 'Personal Relations in Industry.' There were something over six hundred men present in two different sections and I felt it was a great opportunity to tell these young men some of the things that we had to find out our own way through life."

The letter enclosed is so interesting we are quoting it in full.

"Dear Arthur: Was very much pleased to get your letter of April 3. Have often thought of you and always get my wife to look in the *TECH REVIEW* to see if there is any '97 news. I don't like to look myself, it is so disheartening to always draw a blank. Yes, I am now a Tar Heel and have been for a year. Have been putting up some big mills for this company (Durham Hosiery Mills), buying machinery, etc., and have had my hands full. Recently bought about \$2000 worth of hose from your concern.

Owing to the slump in the hosiery business, work on the new mills has been stopped and I suppose I shall soon be looking for a big job suited to a small man. If you hear of one, yell and yell loud.

You ask what I have been doing since I left Squantum. Well, I only jumped from the frying pan into the fire so far as business was concerned. I hopped over to the shipping board and supervised the design and purchase of a \$25,000,000 shipyard and then was district plant engineer in charge of all shipyard construction and maintenance from Baltimore to Wilmington, N. C. We moved to Baltimore and had a delightful home there which I enjoyed during the brief intervals I was at home, but was on the road most of the time.

I left there for this job just a year ago and we moved in April. We like the people and climate here immensely and the job has been a most enjoyable one, live from start to finish, with everything up to yours truly, from handling the cash to installing the machinery.

Please write again; will guarantee a reply. Mrs. Atwood and I send our best regards to you all. Sincerely yours, (Signed) Thomas C. Atwood."

1899

W. MALCOLM CORSE, *Secretary*, 603 Elm Street, Westfield, N. J.

Clancy M. Lewis, secretary of the Manufacturers' Association of Seattle has been sent to Olympia to take charge of the Manufacturers' Service Bureau there during the Legislature's session. This information comes from the *Seattle Times* of January 19. Lewis is also working on the proposition of forbidding opium coming to the United States from China.

Clarence B. Cluff is connected with the American Cotton Oil Company as manager of their manufacturing department. He is located in their New York office and lives in Westfield, N. J. Cluff has been with the American Cotton Oil Company and N. K. Fairbank Company of Chicago and St. Louis since he graduated. He has recently been elected a member of the American Institute of Chemical Engineers.

William C. Phalen, '99, of the United States Geological Survey has been engaged as geologist by the Solvay Process Company with headquarters in New York City. Dr. Phalen studied chemistry at the Institute and then took advanced work in geology, receiving his master's degree in 1902. He is an expert in geology, petrography, and mineralogy and has undertaken pure scientific research in geological problems. He has also investigated many ore deposits for the Government. Lately he has been mineral technologist in the Bureau of Mines in Washington.

The following clipping regarding Thomas P. Robinson, whom we all remember as the Major of Technology's Winning Battalion in our freshman year, came as a distinct surprise to the secretary:

"Thomas P. Robinson, an architect of Boston, was awarded today the Oliver Morosco prize in the annual competition for the best play written by present or past students of the English Forty-Seven course at Harvard University and Radcliffe College. Mr. Robinson, who attended the Class in 1912-13, has been for several years artistic adviser to Professor George P. Baker in the English Forty-Seven Workshop, as the dramatic laboratory at Harvard is known."

While it was known that Tom was a first-class architect, it was not as well known, evidently, that he was also a playwright. I wrote Tom a letter to verify this unusual piece of news and have received a reply from which the following is quoted. I shall not attempt to change his wording as to do so would be to ruin the letter. Congratulations to Tom on his success as a playwright. Here's hoping that he has a brilliant future ahead of him.

"I have always written plays. You remember it is said of Virgil that he 'lisp'd in numbers, for the numbers came'. Since this is not a scientific statement it ought to be explained that this means — when Virgil was a baby, verses flowed through him as naturally as water through a sluiceway. Plays began running through me in the same way at the same age—that is, as soon as I got out of Tech. As a rule, the plays came only in pieces and the pieces seldom put themselves together into a single product. On the rare occasions when they did, I sent the product to an agent in New York. The agent, trying to sell them, discovered that they were different. For a long while I considered this a distinction, but I discovered finally that only part of it was a distinction, and that the other part was ignorance. The agent introduced me to Edward Knoblock who wrote 'Kismet' thinking that he could tell me wherein my difference lay. He was very nice about it, but he didn't tell me. He did tell me some things, however. One of them, I remember, that it took him sixteen years to find out all about his own differentness. He did, however, introduce me to Professor Baker of Harvard who, he said, was an expert in this very matter. Professor Baker read some of my manuscripts and finally decided that, although I was different, I was not so entirely different, that I might possibly be made into something, and he undertook the job.

Of course all of this, like the beginning of a fairy tale, was a very long while ago. I am an architect, as you know, by training and practice, and I have not had a great deal of time for the making of plays. So far, however, as playwriting goes, Professor Baker lifted me out of the woods, planted me in the clearing, and chartered a course, and from time to time I have been following said course.

But Professor Baker's playwriting courses have been very much written about, and, from my point of view, have been given an emphasis which throws into the background all the rest of his work. In reality he is the indicator of the present dramatic renaissance in this country. He is also the force behind it. If not the actual force himself, at least

he is the man who has tapped the source of it. In connection with his teaching courses is his laboratory work which he carries on in what is known as 'The 47 Workshop'. If you want to know what 'The 47 Workshop' is, look up his article in the February *Century*."

J. Walter Allen writes as follows:

"I entered the employ of the Boston Elevated Railway Company immediately after graduation from Technology, working in the department of electrical engineering, and have been in that department ever since. I have worked in practically all the different classes of engineering work in the department, being rated as first electrical assistant from January, 1906; in June, 1910, being changed to assistant electrical engineer; and having been in charge as electrical engineer since January 1, 1917. The work is very diversified and extremely interesting."

MR. LAWRENCE C. SOULE, '99

Chief Engineer, Industrial Sales Department, American Radiator Company

An announcement which will give great pleasure to the "Arco" organization comes in the promotion of Mr. L. C. Soule to the position of chief engineer, industrial sales department.

Mr. Soule, better known as "Larry," is a graduate of the Massachusetts Institute of Technology. He came to the company in 1907 as architects' representative of Chicago Branch. A year later he was transferred to the Vento Department as engineer, where he did splendid work in developing the sales of Vento throughout the country. He is largely responsible for the engineering data so widely used in connection with Vento and which now appears in splendid form in the Vento Data Book. In 1915 he was transferred to the staff of engineers of the Institute of Thermal Research of Buffalo. There he rendered very efficient service in conducting tests on all forms of heating apparatus.

When the industrial sales department was organized out of the old Vento Department in June, 1919, Mr. Soule was transferred to it. Here his great ability, experience in heating and ventilating engineering, and his willingness to co-operate with all to further the interests of the company, won him the respect and confidence of all his associates. We are very glad now to congratulate Mr. Soule upon his well-earned recognition and we wish him the utmost success in his new office. Mr. Soule's headquarters will remain in Buffalo, New York.

1900

INGERSOLL BOWDITCH, *Secretary*, 111 Devonshire Street, Boston, Mass.

The annual dinner of the Alumni Association was held at the Walker Memorial on January 8 and fifteen members of the Class were present: Allen, Bowditch, Bugbee, Conant, Cutting, Fitch, Graff, Jennings, Neall, Patch, Reardon, Richardson, Russell and Silverman. The speakers after the dinner were very interesting and Dr. Taylor told several amusing stories.

The Boston News Bureau reports that the Leonard Construction Company of Chicago has declared a stock dividend from surplus of \$1,000,000. It is expected that another stock dividend of similar amount will be declared early in 1921. There is no doubt that Clif Leonard is one of the leading men in the construction line in Chicago. He has been made a director in one of the larger banks and it is reported that he has been appointed on some government commission.

Frank Chase is another man of whom the Class can be proud. He is extending his activities and hopes to get some work in the east as soon as business improves.—George W. Cutting, Jr., has resumed his work of consulting engineer with offices at 10 Post Office Square, Boston. He was engineer, production department, of the Atlantic Corporation at Portsmouth, New Hampshire.—Patch has been working for the Aberthaw Construction Company on the Great Falls Manufacturing Company building at Somersworth, New Hampshire. He had charge of the foremen on the job and ran a sort of school for them. He does not know when he will return to Beirut.

The Alumni office has lost track of James N. McIntosh of Course II and Robert H. Clary, Course III. If anybody knows where they are to be found, Walter Humphreys, secretary, will be glad of the information.

The following changes of addresses have been received:

George W. Cutting, Jr., 50 Newton Street, Auburndale 66, Mass.; Edwin G. Gallagher, Lake Torpedo Boat Co., Bridgeport, Conn.; Harry H. Hamlen, 528 West 111th Street, New York, N. Y.; Prof. Henry V. Hubbard, Robinson Hall, Harvard University, Cambridge, Mass.; Theodore C. Tuck, 49 Mayflower Avenue, New Rochelle, N. Y.; Harry L. Walker, 144 East 54th Street, New York, N. Y.

1901

HOWARD T. CHANDLER, *Secretary*, Hinckley Road, Milton 86, Mass.

A course of twelve lectures on petroleum geology and the engineering phase of petroleum development was delivered during March at Harvard University by Frederick G. Clapp. A lecture was also delivered by him on March 15 before the Geological Conference in Cambridge, the subject being "A geologist's trip through China." All of the lectures were profusely illustrated by lantern slides.

From a clipping under the title, "Hog Island Ends its War Career," we read the following:

"Hog Island, the largest shipyard in the world in which \$350,000,000 was involved, ended its brief but glorious history this morning with a ceremony far more simple than those which had marked any one of the 122 launchings.

The man who transformed a swampy wasteland into a vast war industry, instrumental in the defeat of Germany, handed a key to the yard to a representative of the shipping board, and the shipyard, as such, was officially closed.

Shortly after 11 o'clock, Matthew C. Brush, president of the American International Shipbuilding Corporation, and directing head of the immense enterprise, walked from the administration building accompanied by Frederick Morris, authorized representative of the shipping board.

Behind the two men were the loyal associates of Mr. Brush, who worked with him from the time the construction of the shipyard was begun.

The procession moved slowly to No. 3 gate, the main entrance to the shipyard. As Mr. Brush neared the gate he turned and gazed wistfully over the great yard, with its empty ways, all but deserted buildings and idle machinery. Then he turned away and walked through the gate, while the others followed.

At 11.45 o'clock No. 3 gate was swung shut, symbolic of the official closing of the yard.

A moment later Mr. Brush handed to Mr. Morris a large four-foot key, fashioned of wood. The key was silvered and bore the inscription 'Presented to Frederick Morris by M. C. Brush, February 4, 1921.'

Inside the closed gate scores of workmen, retained to keep the idle machinery in good condition, pressed against the cracks in the boards.

After Mr. Morris had accepted the key he drew from his pocket a jewel case. 'Here,' he said, addressing Mr. Brush, 'is another key to the island, so that you can come back at any time, for you are always welcome.'

He then gave to Mr. Brush a solid gold key, two inches long, on which was engraved the inscription, 'Frederick Morris to Matthew C. Brush, Hog Island, Pa., February 4, 1921.'

Near Mr. Brush during the ceremony stood his mother, Mrs. Louis Doud Brush, and his thirteen-year-old nephew, George Sabin Brush. Pride shone in the mother's eyes as a successful finis was written to his unusual career at Hog Island.

Over the gateway to the shipyard the blue and white flag of the United States shipping board fluttered in the fresh breeze from the Delaware.

Officials of the American International Shipbuilding Corporation who witnessed the closing of the yard included Harry A. Arthur, treasurer of the corporation; Thomas J. Forde, P. G. O'Neil, E. L. Dunn, P. H. Kunzig, Charles J. Fay, A. R. Smiley, C. L. Hardrader, R. G. Littlejohn, Captain C. S. Bookwalter and B. F. Doran.

Representatives of the shipping board included J. W. Fenton, W. S. Turner, Jr., J. B. Bloomberg and H. F. Baile.

Following the closing of the island the officials and guests proceeded to the shipyard restaurant, where Mr. Brush gave a farewell dinner to his associates.

Speaking informally across the table to his associates, Mr. Brush told for the first time of the money involved in the Hog Island project from the time the first stake was driven until the shipyard closed today.

'You have just seen the liquidation of a \$350,000,000 corporation,' he said, adding that it was the first time a corporation of this size has been liquidated in the history of the world.

He told his associates that the American International Shipbuilding Corporation and the government are 'square.' Neither owes the other a penny.

At the same time Mr. Brush again advocated his plan to have the shipyard converted into a shipping terminal. His plan would be to have the government lease the shipyard to a corporation under a long-term lease of possibly ninety-nine years. No private individuals could afford to buy the shipyard outright, he said, paying the government what it is worth.

He declared Hog Island had facilities such as no other port in the world for a mammoth freight terminal, which would dwarf the Bush terminal in Brooklyn.

He thanked his fellow workers for their loyal service. Mr. Morris then made a short address, expressing his appreciation of the work accomplished by Mr. Brush."

"BENSON PRAISES BRUSH FOR HOG ISLAND WORK

Washington, D. C.

Matthew C. Brush, Philadelphia, Pa.

Please accept my congratulations upon the completion of what is undoubtedly the greatest feat in connection with ship construction in the history of the world, and which should remain as a monument to your initiative, intelligence and energy as long as the republic endures.

(Signed) W. S. BENSON."

The secretary had the pleasure of talking to Parrock, general manager of the Lumen Bearing Co., Buffalo, N. Y., a few days ago. He seemed to be well and happy and would like to be remembered to the rest of the Class.

Howard I. Wood sends a short message as follows:

"Hope I can be at the twentieth anniversary." — Arthur G. Hayden sends a similar one: "I hope to be able to attend the twentieth anniversary of our Class and meet some of the old fellows."

Speaking of "old fellows" reminds the secretary of an amusing experience which came to his attention recently, an experience which should call attention to the fact that most of us look differently to others than we do to ourselves, when we stand before the mirror complimenting ourselves on how little we have changed. The secretary was at a high school alumni committee meeting and one of the alumni from a class close to his remarked that a few weeks previously he had visited the school and had been shown around very carefully. A few days later he met the gentleman who had taken him around, who told him that shortly after he had gone one of the boys inquired "if that nice-looking old gentleman was one of the graduates." We won't have any inquisitive small boys at the reunion, so let everybody come without fear.

1902

FREDERICK H. HUNTER, *Secretary*, Box 11, West Roxbury, Mass.

BURTON H. PHILBRICK, *Assistant Secretary*, 585 Boylston Street, Boston, Mass.

Seventeen classmates turned out for the annual banquet of the Alumni Association at the Walker Memorial on Saturday, January 8, the best delegation from any Class for a decade in either direction. A number of classmates met in the alleys in the afternoon and enjoyed several strings before the dinner. Austin Wood and Steve Gardner had the best scores, but neither reached the century mark and the Class record remained intact by a large majority. From Worcester came a delegation 100 per cent strong, with Bassett and Vaughan, Starr represented Providence and Steeve Gardner showed up after long absence in the far off wilds of Quincy.

A Class dinner was held at the Technology Club of New York on the twenty-fifth of February with the following men present: Montgomery, Mathesius, Franklin, Kern,

Robinson, Baker, Philbrick, Fruit, Place, Hammond, Annett, and Hanson. At a business session Baker was nominated for vice-president for the Class to represent the New York district and Joe Philbrick was chosen treasurer of the local organization. Mathesius and Montgomery who have served as the officers of the New York section declined re-election on account of the duties they have assumed in the Technology Club of New York, of which Montgomery is president, and Mathesius, treasurer. Hathaway was unable to attend the dinner as he was convalescing from a touch of grippe.

A Class dinner in Boston at the Walker Memorial on Saturday evening, February 26, was less successful in the point of numbers. Some bowling preceded the dinner, the honors again going to Austin Wood. After the dinner, adjournment was taken to the gymnasium where we were spectators of three athletic events, a boxing meet with Yale, a wrestling match with Yale, and a gymnasium contest with Dartmouth. The boxing contest and the gymnasium meet were defeats for Tech, but were well contested by the home teams. The wrestling match was a Technology victory by a wide margin.

Lou Cates is assistant general manager of the Utah Copper Co., P. O. Box 1775, Salt Lake City, Utah, in addition to his duties as manager of the Ray Consolidated Copper Co. He reports that Walter Cook is at Saldura, Utah, working on potash deposits. — Charlie Boardman having completed his work for the Shipping Board some months ago is again with the Clifton Manufacturing Co. of Jamaica Plain, Mass. — Archie Gardner writes from Toledo that he was busy last year, putting up a best sugar factory in Wisconsin, the job being completed on time in spite of the many hindrances to building operations which slowed up construction work last year. Since the completion of this work he made a trip to the Pacific Coast, looking into beet sugar propositions. During the construction of the factory Archie made a trip from Wisconsin to his former location in Jacksonville to supervise the launching of a sixty-five hundred-ton concrete ship, which went off successfully. — Burt Philbrick attended the national convention of school superintendents at Atlantic City in February, representing the Salem (Mass.) school board. — Harry Saylor is vice-president and secretary of Williams & Saylor, Inc., this new advertising firm is located at 450 Fourth Avenue, where Saylor will be glad to see any classmates that may be in New York. — Merton Rice is living at 108 Johnston Street, Brooklyn, his business address being 50 Court Street in the same city. The Class secretary recently moved his abiding place to 41 Wren Street, West Roxbury, about two blocks from his previous domicile. This brings the '02 delegation in West Roxbury onto the same street, as Tom Finneran resides at 113 Wren Street.

The sympathy of his classmates will be extended to Charlie Boardman on the sudden death, last fall, of his wife, and the loss of his father in January.

1904

HENRY W. STEVENS, *Secretary*, 12 Garrison Street, Chestnut Hill, Mass.

After a lapse of two issues, the Class of 1904 reappears in the REVIEW with a few notes.

It is intended that another Class re-union will be held the coming spring, probably about the middle of June. The actual time and place are not yet decided, but active arrangements are under way, and exact information will be forwarded to the members of the Class, as soon as possible.

The following postcard message was received some time ago, from Selskar Gunn: "Dear Stevie: I owe you a letter and you shall soon have it. Back at work and in good fettle. Am stationed here as adviser in public health administration to the Ministry of Health of Republic of Czecho-Slovakia."

The promised letter has not yet arrived but a sharp lookout is being maintained for it. Gunn's address is Ministerstvo Zdravotnictvi, Prague, Czecho-Slovakia, which is apparently a combination of words which can be read, or written, but not pronounced.

E. H. Russell, Jr., has recently accepted the position of assistant superintendent of agents, with the Equitable Life Insurance Co. He is specializing in the accident insurance department, a branch recently established by this company. "Gene" still calls Boston his home town, although the work of his new position will take him all over the eastern portion of the United States. At this writing he is in Florida for about six weeks.

Earl Cunningham has taken up his residence in Cambridge, Mass. He has been

engaged in the supervision of the installation of the equipment of a new factory for the Johnson Educator Company, manufacturers of crackers.

Edward F. Parker, who is one of the Federal Bank Examiners for the New England States, has been transferred from the Maine district back to Massachusetts. He has been assigned to the district from Gloucester to Provincetown, which he says is fine in the summer, but trips to Nantucket in the winter are not so pleasant. He has taken up his residence in his native town of Reading.

Miss Marion C. Coffin has attained a considerable reputation as a landscape architect. Her training at the Institute has been supplemented by long periods of study abroad, which have made her thoroughly familiar with all the various types of gardens. She has designed many very beautiful gardens in New Jersey, Long Island, and other places in the vicinity of New York City. Recently she was engaged in the laying out of the grounds of the State College at Newark, Delaware. The New York *Evening Sun* of September 22, 1920, contained a comprehensive article on Miss Coffin's work.

Elmer Allen Holbrook, Course III, has assumed the position of assistant director of the Bureau of Mines, succeeding Dr. Cottrell, who is now director of the bureau. Mr. Holbrook entered the bureau in 1917 as supervising mining engineer at the Urbana Station; during the first half of 1919 was made acting chief engineer and in July, 1919, was made superintendent of the Pittsburgh Experiment Station, where he was until called to Washington, July 1, 1920.

Guy C. Riddell, Course III, consulting metallurgist, formerly in charge of metallurgical and mining problems for the United States Tariff Commission, is now a secretary and consulting engineer of the Wah Chang Trading Corporation, 233 Broadway, New York, N. Y.

Richard K. Hale, who was chief-of-staff of the famous "Y. D.," or 26th Division, U. S. A., is now with the department of public works of the Commonwealth of Massachusetts, being one of the three engineers in charge of the division of waterways and public lands, his office being located in the State House.

The issue of the *Daily Illini* for January 30, 1921, contains an extensive article describing the tests to be made at the University of Illinois, the results of which are to determine the design of the ventilation system for the new vehicular tunnel to be built under the Hudson River between New York City and Jersey City. In actual charge of the investigation is Prof. A. C. Willard, head of the department of mechanical engineering of the university.

The investigation is to be very complete and entails the construction of a concrete chamber or duct three hundred feet in length, to correspond with the proposed design of the tunnel. Motor-driven fans will be installed, and every effort made to simulate as closely as possible the actual conditions to be encountered in the proposed tunnel. It is expected that the test will take at least three months to complete, and from the results it is hoped that exact data will be derived, from which a satisfactory design of ventilating system can be made for the tunnel. To quote Professor Willard: "The exact solution of this problem will mean much to the science of engineering. If the plan is found practicable, there is no doubt that many tunnels for motor traffic will be run in the near future. Incidentally, it will mean a lot for the university. The reputation of the Engineering Experiment Station for its research in matters of this kind is known, and Illinois was selected on this account, but the fact that a question dealing with problems in New York should be brought out to the University of Illinois is significant in itself."

To the mind of the secretary there is also considerable significance in the fact that the man in charge of the work is a member of the Class of 1904, Massachusetts Institute of Technology.

At the annual dinner of the Alumni Association held last January, the Class representation was a little smaller than usual, there being eleven present instead of the regular number of thirteen. Although there was nothing wildly exciting about the occasion, the members of the Class held a small old home week and enjoyed meeting each other. There was one remarkable thing about the gathering. This was the presence of Mert Emerson at our table throughout the entire evening. Mert usually sits up at the head table and can only pay us a fleeting visit. In passing, it should be recorded, that Mert has been elected vice-president of the Alumni Association, so we presume he will be eligible for a seat at the head table next year. Those present at the dinner were A. P. Porter, Whitmore, Haley, M. L. Emerson, P. S. Sweetser, Groves, Kramer, E. H. Russell, Jr., Parker, Munster and H. W. Stevens.

The secretary has received an announcement of the marriage of Mrs. Nancye Griffin Mattox to William H. Edgecombe, on February 9, 1921, at Charleston, West Virginia. Mr. and Mrs. Edgecombe are at home at 6 North Marzella, Covington, Kentucky.

Charles H. Stebbins has left the Croulshite Company, and for some time past has been connected with the Virginia Smelting and Refining Company.

1905

GROSVENOR D. W. MARCY, *Secretary*, 246 Summer Street, Boston, Mass.

CHARLES W. HAWKES, *Assistant Secretary*, 246 Summer Street, Boston, Mass.

Apparently our plaintive wail in the last issue of the REVIEW brought results, and incidentally proved that the Class news is actually read by some. B. L. Johnson writes in as follows:

"Have read page 87 TECHNOLOGY REVIEW, January, 1921, lines 5-34 inclusive. Sorry I haven't been able to help you out. I have been in Washington since 1917, in which year I made my last trip to Alaska, and am still on the Geological Survey. Only news item I have seen recently is given on page 17, of the *Engineering and Mining Journal* for January 1, 1921. Sincerely, B. L. Johnson, *United States Geological Survey, Washington, D. C.*" The news item mentioned appears elsewhere in this issue under the title, "In the Public Eye."

This same notice and some correspondence elicited the following items from the men indicated:

"Reading the TECH REVIEW on train for West, and note small amount of Class news. For myself I have been given a year's leave of absence by the du Pont Co. and am on my way west by the doctor's orders now. Will stay at Denver, Colo., for a while but probably will go to the coast later. My address will still be 115 Beverly Road, North Montclair, N. J. Hope all is well with you and yours. — E. W. Wiggins."

"On the chance that your card is right in saying that the Class is interested in my recent movements, which to me have been quite prosaic, the following brief note is given. As I have been since graduation, I am still in the Coast and Geodetic Survey, which is now a commissioned service. At present I am living in Washington, at 1465 Columbia Road, N. W., and am on shore duty in our Washington office. Until recently I have been on sea duty, as commanding officer of the U.S.S. 'Isis' until a year ago and then commanding the U.S.S. 'Mikawe,' both vessels engaged in hydrographic surveying along the South Atlantic Coast. — Robert F. Luce, *United States Coast and Geodetic Survey, Washington, D. C.*"

"Your card has lain on my desk for a month unanswered, but this is not a true indication of how busy I have been, it merely shows the effect of southern climate on a northerner. I am at present in charge of the research work of the Southern Cotton Oil Co., and find my lot has been agreeably cast with a number of Tech men; F. N. Smalley, David Schwartz, F. I. Gibson, and G. O. Haskell are among these here in our Savannah office. Mr. W. R. Crandall, '16, has recently come from Dr. Wesson's New York laboratory to assist me here. — Yours truly, Herbert S. Bailey."

"Healthy, happy and hopeful is yours truly. Hope this finds you the same. — Sincerely your classmate, C. B. Mayer, 727 Lemcke Building, Indianapolis."

"Your card received. Regret not to have anything worth while to report. Am starting in brokerage work for myself, handling steel bars, also ferro alloys and doing consulting work on metallurgical problems. Hoping you are well, I am. — Sincerely yours, Bill Keen, Room 1581, 50 Church Street, New York City."

Hub Kenway sends in the following note which is an interesting item in itself in addition to the one about Prichard:

"I enclose clipping relating to Prichard which he is probably too modest to mention to you, but which will be noted with pride and satisfaction by the rest of the '05 rough-necks. Bob Lord and I are already making plans for the next reunion. It will be *some time*. I've sampled it already. — Hub."

The news item referred to is about a column and a half from the *Beverly Evening Times* announcing the election of Charles R. Prichard as vice-president and general manager of the Lowell Gas Co. Prichard has been connected with the Beverly Gas and

Electric Co. for fifteen years, and if the news item is to be believed he is going to leave a large hole in Beverly and make Lowell lopsided. Such expressions as the following: "Prominently identified with the business and industrial life of the City," "Connected with many civic and financial organizations," "An active part in every movement for community advancement," "Won the confidence of the citizens through his ability and personality," "Has a legion of friends and made a splendid record in all capacities," and so on, make it look as if Prich had subsidized the reporter or given him a drink of home brew. It winds up with the interesting statement that the Lowell Co. is one of the largest gas companies in the state, distributing a billion feet of gas annually and having 30,000 meters in service. Will some one please point the connection between this item and the gas business?

Another news item of interest to members of '05 appeared in the *Boston Transcript* of February 5 in the shape of quite a detailed description of the plan for a Wellesley College faculty quadrangle which was worked out by Eliza J. Newkirk, '05, and George F. Marlowe, associate architect. In addition to illustrations and explanation of the plan it pictures Miss Newkirk's history, saying she is a graduate of Wellesley, 1900, studied architecture at the Massachusetts Institute of Technology, has for many years been associated with the art department at Wellesley as a lecturer in the history of architecture and practiced independently in Boston for a number of years and has already built a number of houses and apartments for members of the faculty and a dormitory for The Walnut Hill School in Natick. She did important work in France in connection with the Fine Arts Department of the Army Education Commission.

Yet another instance of '05 men breaking into the limelight is clipped from the *New York Commercial* of January 8 which describes a meeting of the New York section of the American Chemical Society and gives several paragraphs to a paper read by Prof. Warren K. Lewis on "New Points of Contact Between University and Industry." Apparently Dr. Lewis found a considerable part of his text in the School of Chemical Engineering Practice at the Institute.

"Messrs. S. Mortimer Ward, Jr., Gorham Crosby and Dyer Smith, beg to announce that on January 1, nineteen hundred and twenty-one, they will become associated in the practice of patent and trade mark law under the firm name of Ward, Crosby & Smith with offices in the Woolworth Building, 233 Broadway, New York City."

Mail has been returned from the following men at addresses noted. If any one can supply a more recent or correct address please notify the secretary.

Edward M. Read, Tegler Building, Edmonton, Alberta; Joseph F. Haley, 134 Dorchester Street, South Boston, Mass.; Isadore Niditch, 10 Caselgate Road, Dorchester, Mass.; Ralph E. Tarbett, U. S. Public Health Service, City Hall, Little Rock, Ark.

New addresses received since the last issue of the *REVIEW* are as follows:

Mr. Waldemar S. Richmond, 1535 West Willis Avenue, Detroit, Mich.; Mr. Le Baron Turner, care Whiting-Turner Construction Co., Stewart Building, Baltimore, Md.; Miss Ida A. Ryan, Orlando, Florida; Mr. Arthur E. Russell, 2 Franklin Street, Medford, Mass.; Mr. Charles B. Mayer, 727 Lincoln Building, Indianapolis, Ind.; Lt. Com. Robert F. Luce, U. S. Coast and Geodetic Survey, Washington, D. C.; Mr. James P. Barnes, care Louisville Railway Co., Louisville, Kentucky; Mr. Gorham Crosby, 38 Douglas Road, Glen Ridge, N. J.; Mr. Horatio Whiting, 30 Vesey Street, New York, N. Y.; Mr. Louis J. Killion, care Monks & Johnson, 58 42d Street, New York, N. Y.; Mr. James M. Lambie, 620 Monongahela Road, Washington, Pa.; Mr. Gilbert S. Tower, The Panama Canal, Mechanical Division, Balboa, Canal Zone; Mr. William H. Keen, Fourth Avenue and Ogden Street, Newark, N. J.

1906

J. W. KIDDER, *Secretary*, 50 Oliver Street, Boston, Mass.

E. B. ROWE, *Assistant Secretary*, 92 State Street, Boston, Mass.

A meeting of the executive committee of the Class was held at the Boston City Club on Thursday, March 10, for the purpose of considering a fifteen-year reunion. For those who did not read the July, 1920, *REVIEW* it might be added that the executive committee was elected at the 1920 outing held at Duxbury and is composed of Charlie Kasson, Ralph

Patch and Charlie Wetterer. The meeting at the City Club was the first of the committee and started conspicuously with full attendance plus the two secretaries.

As a result of the meeting it was decided a reunion should be held the latter part of June, preferably at a location somewhere between New York and Boston. It was decided to send a preliminary letter to about fifty members of the Class for the purpose of sounding some of the other '06 men on the subject.

The replies received up to the time of the second meeting, held March 21, prompted the committee to decide to proceed with the celebration. By the time this issue of the REVIEW is published complete plans will have been sent to every man on the Class list. If you have not already made plans to attend, please delay no longer, but drop a line to Ned Rowe that you will be among "those present". Those who went to Duxbury last year were all keen for a celebration this year. An outing of the kind planned presents an opportunity for getting together and renewing Class associations in a way which can only be appreciated by those who have attended such affairs. Each '06 man is most earnestly requested to be present, not only to secure a good attendance, but for the enjoyment which he as an individual will surely derive from the occasion.

It was the spirit of the replies received to the first letter which led the committee to decide the celebration could be put over in fitting style. As usual, when we mentioned '06 to Harold Coes his response was prompt and denoted action. He wrote that he and Charlie Howard were listing the New York men from the 1920 *Register of Former Students* preparatory to opening the campaign there. The committee appreciates the strength of the '06 crowd in New York and realizes, with a location favorable to the latter place, the Boston crowd must turn out strong to counteract the idea that Boston is a suburb of the Gay White Way.

We sent a letter to Jack Norton thinking that he might be planning to come on this way this summer. Jack replied he would be busy teaching summer school and therefore would be unable to be with us. — Herbert Dean and Percy Tillson held an '06 luncheon in Philadelphia (by themselves) and voted to attend 100 per cent strong. Tillson promised to do publicity work in Philadelphia, which means that city should be well represented at the outing.

Captain George Hobson wrote he would attend, but he had just received orders to sail for Colblenz on April 5, and at the time of the reunion he would drink our health in a big stem of Cumbacher. Unless you are sure of consolation like Hobson's, plan to attend the reunion without further delay. The inference is that all '06 men in this vicinity should be present.

Hub Whiting and Phil Stanley both wrote they would attend if possible. Stanley anticipates an extended business trip which may interfere, but is fully aware of the old adage regarding the interference between pleasure and business, etc. — Walter Davol will be present if the annual outing of the New Hampshire Tech Club does not prevent.

Andy Kerr dropped in to see the secretary a few days ago and expressed his interest in the project. Andy is at present a member of several committees of Plymouth which are busy with the coming tercentenary celebration. In conclusion: SIGN UP FOR THE REUNION NOW.

The following obituary appeared in the March *Mining and Metallurgy*:

"Arthur P. Watt died on December 29, 1920, from the effects of an attack of influenza contracted over a year ago. He was born in 1884 at Montreal, Canada.

Watt graduated from the Institute in 1906, doing special work in ore dressing under Professor Richards, and after graduating he spent a year in helping on the preparation of Volumes III and IV of the 'Treatise on Ore Dressing.' Shortly thereafter, he went west to take up active work in mining, and in 1907 was with the Boston Consolidated Mining Co., now a part of the Utah copper mine. The following year he was transferred to this company's mill at Garfield, Utah. From this point on, practically his whole time was devoted to the practice and study of ore concentration in which he became most proficient. He served with the American Smelting and Refining Co., the Nevada Consolidated Mining Co., the Boston Corrillos Mine Corporation, and the Chino Copper Co., assuming positions of increasing responsibility and acquiring knowledge which proved of much value later.

His next work was with the Balbach Smelting and Refining Co., in charge of a small concentrator which handled a multiplicity of ores and afforded Mr. Watt an excellent opportunity to prove his ability as an investigator.

The St. Louis Smelting and Refining Co. next secured his services as metallurgist for the lead concentrator at St. Francois, Mo., in February, 1914. Many important investigations were conducted, and during this time Mr. Watt wrote his paper on concentration practice in southeast Missouri, which is an authoritative treatise on concentration in this district.

While with the St. Louis Smelting and Refining Co., Mr. Watt also did considerable work for the Mine La Motte Co., the management of which was closely associated with the former company. The Mine La Motte property, on account of the presence of lead carbonates in quantity, associated with galena, and also copper, nickel, cobalt and iron minerals, gave a problem quite distinct from any other concentration work. Mr. Watt entered into this work with his usual enthusiasm and the problems were successfully solved. The Mine La Motte management was later severed from any connection with the St. Louis Smelting and Refining Co. and was known as the Missouri Metals Corporation, and in August, 1917, Mr. Watt became consulting metallurgist of the new company.

In January, 1918, he gave up work in the field and established himself as a consulting metallurgist in New York City. He had already been quite successful at this work and the future held forth great promise.

On April 2, 1919, Mr. Watt was married to Miss Ethel May Morse of Brooklyn. There is one child, a daughter.

Mr. Watt was a member of the A. I. M. E. and also of the Mining and Metallurgical Society of America, being chairman of the New York Section of the latter society for the year 1920. — C. G. DRESSER."

1907

BRYANT NICHOLS, *Secretary*, 2 Rowe Street, Auburndale, Mass.

HAROLD S. WONSON, *Assistant Secretary*, Care W. H. McElwain Co., Manchester, N. H.

Early in February the secretary received a note which was very gratifying as an exhibition of Class of 1907 interest. The queer part of it was, however, that it was not from a member of the Class at all. It was from Mrs. K. T. Bonta, the mother of Edwin W. Bonta, '07, and began thus: "I notice a shortage of news of Class of 1907 in the TECHNOLOGY REVIEW for January, and am enclosing a clipping which will tell what one of your members is doing." Wouldn't it be fine if a lot of you fellows of the Class would follow the example set by Mrs. Bonta! Here's the clipping, taken from a Syracuse, N. Y., paper:

"Edwin W. Bonta of the firm of Taylor & Bonta, architects, with offices in the Gurney Building, 474 South Salina Street, Syracuse, N. Y., went to Hachimana, Japan, September 1, 1920, to become associated for two years with W. M. Vories & Co., a firm of Japanese and American architects now engaged in satisfying a general demand on the part of Japanese for buildings of American type. Mr. Bonta, one of the foremost architects in this part of the country, was in the far east during the latter part of the world war, and in that time became acquainted with conditions in Japan, and with the growing interest of Japanese in style and architecture of American building. Mr. Bonta says they have begun to discard their own ideas of building in favor of occidental practice.

In going to Japan, however, Mr. Bonta does not sever his connection with the firm of Taylor & Bonta, of which he became junior partner in 1910, and he plans to return here at the expiration of the two-year period. 'There are not many American architects in Japan,' Mr. Bonta explained, 'and there is an increasing desire for our type of building, especially for business buildings and hospitals. It is interesting to remember that Vories & Co. are now erecting buildings similar to those in American cities in the vicinity of Kyoto, the old capital of Japan, where stand the temples of the old regime.' Mr. Bonta said it was partly this field for practice in his own profession that attracted him to the Orient, as well as the romance of having a part in what well may be the beginning of the surrender on the part of the Japanese of their oldest ideas and customs in face of occidental claims of better sanitation and building efficiency.

Having been graduated from Massachusetts Institute of Technology in 1907, Mr. Bonta returned to Syracuse, his home, and entered the office of Mr. Taylor. Three years later he was made a partner in the firm, which, since 1907, has designed many notable buildings in Syracuse. Among these are the University Club in Fayette Park, the Young

Women's Christian Association building in East Onondago Street, the Warren Street Dey Brothers Co. store and the Jewish Temple of Concord at University Avenue and Madison Street.

In 1917 Mr. Bonta entered the foreign service of the Young Men's Christian Association and was assigned to Russia as a member of the American 'Y's' mission to the Russian soldiers. He was engaged in this work for two years, and during that time was thrown into intimate touch with the common people of the country. For several months a series of articles on the Russian peasant by Mr. Bonta has been running in *The Atlantic Monthly*. Mr. Bonta is also author of articles dealing with colonial architecture in Western New York, and had an article on homes of the Russian peasant in *Good Housekeeping*.

A note from Jim Barker dated February 16, states that his permanent address is Care of First National Bank of Boston, Buenos Aires, Argentine Republic, South America. Jim is manager of this branch of the bank. — An item in *The Tech* for January 21, 1921, states that Dr. E. L. Chaffee, '07, of the Cruft Laboratory at Harvard, gave a talk to the members of the Radio Society, on the subject of modulation and interference. — Lawrence R. Davis, 1205 Monroe Street, Denver, Colorado. — Charles A. Eaton, 84 Gore Street Kingston, Ontario, Canada. He is proprietor of the Canada Cutlery Co. Ltd., at the same address having built the plant about a year ago. He is married and has a daughter born in 1919. — Harry A. Frame, National Products Co., Cleveland, Oklahoma. — F. S. Hamilton is a life insurance salesman for the Equitable Life Assurance Society of New York, at 1094 Old South Building, Boston, Mass. — Lawrence C. Hampton, 5504 Carlton Way, Los Angeles, California. — Hudson B. Hastings is an economist associated with the Bureau of Economic Research, backed by the Francis T. Pollak Foundation. Hud lives at Garden Road, Wellesley Hills, Mass., with his family consisting of a wife, two boys and two girls.

The following article is taken from *Builders*, the house organ of Lockwood, Greene & Co., Boston:

"Kenneth Moller was born in that city in New York state about which the Englishman asked this question: 'What are Yonkers?' At ten years of age he moved to Boston and for eight years attended the Volkmann School. He entered Harvard College in the Class of 1906 and was graduated with the degree of A.B. in 1905. Upon graduation from Harvard, he entered Massachusetts Institute of Technology and was graduated with the degree of B.S. in mechanical engineering in 1907. He taught in the mechanical engineering laboratory of M. I. T. for one and a half years, at the end of which time he went to Providence as engineer for the Fuel Oil Engine Company on design and construction of large experimental Diesel engines. For two years he was with the Commercial Camera Company selling photostats all over the United States. He spent seven years with the Jenckes Spinning Co. at Pawtucket as general superintendent and later as assistant treasurer, and three years with the William Whitman Co., Inc., in charge of design, erection equipment and sale of output of the Katama Mills in Lawrence. For one year he was with the quartermaster corps, United States army, as assistant to Albert L. Scott, who was then in charge of the clothing and equipage division, and later he was chief of the manufacturing branch of the C. and E. division charged with the purchase, production and inspection of all the clothing for the United States army. Mr. Moller came with Lockwood, Greene & Co., engineers, December 15, 1918, and was made district manager of the Boston office, January 1, 1919.

On January 1, Mr. Moller and Mrs. Albert A. Sercomb of Santa Barbara, California, were married at Santa Barbara and on January 3, Mr. Moller was elected a director of Lockwood, Greene & Co."

Don Robbins was married March 21, to Helen Mae Salsich at St. Petersburg, Florida, this being the second time, his first wife having passed away during the influenza epidemic in the fall of 1918. Don is assistant to Nat Middleton, the two men directing the engineering department of Hornblower & Weeks, 60 Congress Street, Boston. He is living in Waban, Mass. — The following announcement was received in January from Pennie Davis, Marvin & Edmonds, 35 Nassau Street, New York:

"We take pleasure in announcing that Mr. Merton W. Sage, who has been associated with us for several years past has become a member of our firm."

Winslow D. Robinson, left the F. W. Dodge Co. ("Dodge Reports"), with whom he had been associated for ten years in January, and is now with the Federal Mutual Liability Insurance Co., 10 Tremont Street, Boston, Mass.

1908

RUDOLPH B. WEILER, *Secretary*, Care of The Sharples Separator Co., West Chester, Pa.

LINCOLN T. MAYO, *Assistant Secretary*, 181 Massachusetts Avenue, Boston, Mass.

The regular bi-monthly dinner was held at the Boston City Club March 17. Present A. M. Cook, L. Coffin, C. H. Bangs, P. L. Handy, R. E. Schirmer, R. B. Todd, W. H. Medlicott, H. P. Gurney, W. D. Ford, A. C. Merrill, E. H. Newhall, A. W. Heath, H. T. Gerrish, L. B. Ellis, Nick Carter, J. Pope, L. Mayo. A letter was read from the secretary showing the condition of the Class finances with a balance on hand of \$37.23. It was decided to get out a Class letter every two years instead of every year and ask for dues for two years instead of one, to save mailing expense. As no letter was sent out last year it will go out this year and on odd years hereafter. After the dinner, through the efforts of A. M. Cook and the courtesy of the Boston City Club, the members attended the regular Thursday night entertainment of the City Club and listened to a most interesting illustrated lecture by Robert A. Lavender, U. S. N. D. S. C., who was the radio officer on the NC-3 on its trans-Atlantic flight.

Once more it becomes our sad duty to record the passing of another of our classmates, Donald Bowman, whose death occurred on January 8 at Mitchell, South Dakota. For many years he had suffered from a goiter and in October sought surgical relief but was advised against it. Immediately upon graduation in Course VI he entered the employ of the Commonwealth Edison Company, Chicago, and continued with them until his death, as engineer of equipment and apparatus. Burial was at Marion, Ind. Pierce, '08, Pardee, Jones and Pemberton, of the Technology Club of Chicago, met the funeral party at the station at Chicago on the way through to Marion. In athletics he was interested in the Tug of War Team, being a member in his sophomore year and serving as coach for the 1910 team for two years. He was not married but his parents survive him.

NEW ADDRESSES

Leland E. Wemple, P. O. Box 1428, American Zinc Oxide Co., Columbus, O.; H. Ross Callaway, care Bally Co. Inc., 9 Spruce Street, New York, N. Y.; Leavitt W. Thurlow, 303 Roxas Building, Manila, Philippine Islands; Joseph B. Sando, 2352 Glenside Avenue, Norwood, O.; LeSeur T. Collins, 605 Swetland Building, Cleveland, O.; Orrin S. Lyon, care J. F. Packenham, 2317 Newkirk Avenue, Brooklyn, N. Y.; Melville B. Hall, Brown & Hall Supply Co., 620 Central National Bank Building, St. Louis, Mo.; Paul E. Fernald, 511 West Wesley Street, Wheaton, Ill.; J. Worth Maxwell, American Smelting and Refining Co., 1108 Mills Building, El Paso, Texas.

1909

CHARLES R. MAIN, *Secretary*, 201 Devonshire Street, Boston, Mass.

GEORGE A. HAYNES, *Assistant Secretary*, 530 Atlantic Avenue, Boston, Mass.

Spring is here and reunion days will soon be at hand. We are going to have a Class outing as usual, and the following committee has been appointed:

Arthur L. Shaw, chairman; H. H. Marshall, Joseph W. Parker, Benjamin W. Pepper, H. E. Whitaker.

It has been suggested that this year the Class meet at some place about midway between New York and Boston. The committee has as yet selected no particular place and is open to suggestions of all kinds with reference to location or otherwise.

In February the Boston men held their luncheon meeting at the Exchange Club with ten men in attendance. It is hoped that these meetings may grow in attendance and each man is urged to make a special effort to be present at the next meeting.

Announcement is made of the marriage of Arthur E. Hartwell, of Houston, Texas, to Miss Claire Hartwell of Jamaica Plain, Massachusetts, on the twenty-eighth of March 1921.

George E. Wallis is now with the Hayes Pump and Machinery Company, Boston, Mass. — F. N. Loud is with the Jackson & Moreland Company.

The following announcement was received from V. C. Grubnau, III:

"The business heretofore carried on here by us, at Waldo, New Mexico, as manu-

facturers of oxide of zinc, has been acquired, on January 1, 1921, with all assets and liabilities by the Grubnau Chemical Company incorporated under the laws of the state of New Mexico, and will be continued by this company in the same way as before. We ask our friends to favor our successors with their patronage and confidence the same as accorded us in the past. *Grubnau, Bryant & Grubnau.*"

1910

DUDLEY CLAPP, *Secretary*, Gloucester, Mass.

The alumni banquet held on the eighth of January was a great success. There was a big crowd, including a round dozen of the 1910 gang. Herb Clev was there with bells on. He is still architecting to beat the band. Carl Sit appeared with beaming face and announced the great news of his engagement. A note from him on this important subject follows. Russell Hastings was there. He has left the Edison Company and since the first of December has been electrical engineer with Arthur S. Knight in Boston. Your secretary didn't have a chance to get any startling news from the rest of the crowd but noted that "among those present" were E. B. Kiely, Allen Curtis, Abbott Allen, Charlie Greene, Berg Reynolds, Gorton James, Kenneth Armstrong, and Ralph Beals.

The following from Carl Sit:

"As I mentioned to you in a casual way at the alumni banquet, I have at last decided to break away from the ranks of bachelorhood and follow the step taken by you last April. Her name is Irene Evelyn Dodge, of Lowell, Mass., and our engagement was announced at a luncheon given by her during the middle of December to a number of her friends. Announcement has just appeared in the papers and am enclosing a clipping from one of them.

I have recently moved my offices from the old quarters to the Buffington Building, Fall River, where I have a much more comfortable arrangement. Would be pleased to see any of the boys there, if they ever happen to be in Fall River."

The *Transcript* published the following:

"Mrs. Olive H. Dodge of Lowell announces the engagement of her daughter, Irene Evelyn Dodge, to Carl J. Sittinger of Boston, a graduate of the Massachusetts Institute of Technology, Class of 1910. Mr. Sittinger is district manager for John A. Stevens, consulting engineer, of Lowell, for whom he is in charge of business in the southern New England territory."

The *Brooklyn Eagle* of January 2 published the following:

"Mrs. David Springsteen of Forest Hills, L. I., announced the engagement of her daughter, Miss Ella Alletta Springsteen, to George E. Batcheller, at a luncheon given to the members of Zeta Phi Epsilon Sorority, on Friday.

Miss Springsteen is a graduate of Packer Collegiate Institute.

Mr. Batcheller is the son of Mr. and Mrs. W. H. Batcheller of 160 Greenway North, Forest Hills Gardens, and a graduate of Massachusetts Institute of Technology."

A card from Frank Bell announces the work of the stork at his domicile in the following fashion:

"Just to let you know am still alive and kicking and wish to announce arrival of a son, Frank Frederick, 3d, born February 7, 1921. Have not time to write further at this sitting, but hope things are going well with you. Give my regards to any mutual friends." Last but not least your secretary wishes to make an announcement which is the most important yet made (from his point of view) namely that Frances Harriet Clapp came into the world on January 27 and is bringing joy to his household.

1911

ORVILLE B. DENISON, *Secretary*, 63 Sidney Street, Cambridge 39, Mass.

HERBERT FRYER, *Assistant Secretary*, 2 Commonwealth Avenue, Boston 14, Mass.

All doubts as to whether the 1911 Ten-Year Reunion, scheduled for June 16-20 (inclusive) at the Mayflower Inn, Manomet Point, Plymouth, will be a "going" affair, have been dispelled, with the registration of twenty-one members at this writing (mid-March.) Add

to this the fact that in accordance with a referendum of the Class the committee is planning to have members bring along their families, if desired, and you will see that the party is bound to be a success. "Jack" Herlihy has agreed to act as chairman, and associated with him at present are "Johnnie" Bigelow, E. J. Whitcomb and the secretary. Only tentative plans have been made to date, but as June approaches and final details are made, the committee will be augmented.

Something went wrong when the 1911 notes for January were set up and your secretary's announcement that he would start the "postscript notes" with a "queen of trumps" looked decidedly silly when the next paragraph told of "Bob" Haslam speaking before the Alumni Council. Here is the paragraph which was left out — a clipping from the *Boston Globe* of December 22:

"BELMONT COUPLE AGAIN CONGRATULATED

Mr. and Mrs. Orville B. Denison of Belmont are receiving congratulations on the birth of their second child, Helen Elizabeth Denison, December 20. Mrs. Denison was, before her marriage, Miss Sara Allyne Dixon of Worcester. Mr. Denison is secretary of the Class of 1911, M. I. T. and was formerly a member of the *Globe* reportorial staff, while at Tech."

Thanks for the good wishes — yes, they're both doing nicely, thank you!

Eighteen members of the Class were present at the annual alumni banquet in Walker Memorial on the evening of January eighth, as follows: Alter, Cumings, Denison, Hall, E. R., Haslam, Herlihy, Jenks, Kenway, Leary, Linehan, McManus, Meisel, Pead, Pepper, Van Tassel, Whitcomb, Henry Wood, and Young. The secretary was once again cheer-and song-leader.

Our old friend, O. D. Powell, writes that Mrs. Robert E. Payn of Oak Park, Illinois, has announced the engagement of her daughter, Dorothy, to one Oliver D. Powell. Later in sending in his coupon for the reunion "O. D." says:

"Inasmuch as June eighteenth is tentatively my wedding-day in Oak Park, Ill., I cannot promise to be on Cape Cod at that time, but if 'she' finally decides to agree with me that June eleventh is preferable I may make it."

Introducing the Fryer-Barker Company, consulting and contracting engineers, Seattle, Washington. Yes, born with the advent of the year 1921, with "Gutzie" on the job out there and "Groucho" still back here. Let the Seattle version of the story be unfolded:

"Now look what we have gone and done. I am here and Bert is soon coming. We are going to specialize in power plants and Bert will probably give you all the 'dope.' I don't just see how you fellows can run a ten-year reunion without us, but rest assured that we will have one here and will be with you in spirit anyway — and that 'spirit' goes all ways as Vancouver, B. C. is but a short distance away."

Our faithful friend, Suren Bogdasarian, is hoping to take in the reunion as he is back in Boston due to business depression. He says he misses the smoke of Pittsburgh. — Lloyd Cooley says, in reply to the warning issued in the last issue: "Glad to see your warning in re wood-alcohol in the REVIEW. We expect to make it so pure you can't smell it. Have seen and heard about a little moonshine but have not tasted any. It's too hard on the inner tubes."

The following clipping from the *Toledo Times* of January first should prove interesting to eleveners:

"The Building Products Co., Summit and Sandusky Streets, announced yesterday the addition of new lines that will make the company one of the largest distributors of building materials in this section.

The company, whose business is that of structural engineers and sellers of building materials, has just been appointed representative for the State of Ohio for the Blaw-Knox Co. of Pittsburgh, the largest manufacturer of building materials.

These lines have never before been represented in Toledo, according to Isaac Hausman, president, who says the addition of these lines marks the highest point thus far in the rapid rise this concern has had.

Six years ago the Building Products Co. began in rented desk space on Erie Street. This it soon outgrew, and moved into offices and warehouse on Sycamore Street. Six months ago the company moved into its present quarters, one of the best equipped stock steel warehouses and offices in the Middle West, occupying an entire city block in length.

The Building Products Co. also has branch offices and warehouses in Columbus and Dayton."

More power to you and your enterprising company, Hausie!

Bancroft Hill, who is harbor engineer for the city of Baltimore, hopes to attend at least a part of the reunion and in a letter cordially invites classmates to look him up when in Baltimore, as he is proud of showing people the harbor.—"Bill" Orchard has moved down to Newark, New Jersey, where the new home of Wallace & Tiernan, chemists, is.—H. R. Tisdale has just accepted a position with the New England Spun Silk Corporation at Newton Upper Falls, Massachusetts, and hopes to be more active in 1911 activities in and about the Hub from now on.—Every so often (much too infrequently) "Pete" White comes to time with a choice letter. Here are his sidelights on the forthcoming reunion:

"Your notice of the eleven reunion next summer just arrived in time. Without the prospect of it I believe that I would have been driven to matrimony for a thrill and eventually polygamy. Dennie you are a saviour and were you to ask my advice I would suggest a 'ten-year reunion every three days.'

Reverting to the subject of bachelorhood to demonstrate the superiority of the blessed single state over that double life, you are commissioned to produce Bill Salisbury and prevail on him to accept my challenge to a quarter-mile run, one third to be run each day, divided into one-sixth of a quarter-mile mornings and one-sixth evenings. By the way all press representatives are to be barred except the *Ladies Home Journal*. You may, however, give *Vogue*, a picture of me in running costume.

In order to demonstrate the superiority of soul and mind over body I shall ask you to have a vote taken on the occasion to publicly proclaim my superiority over 'Fat' Merrill on all the fine points of personal beauty. This vote will be confined to the ladies of the party. However, males will be allowed to place proxies in my hands if married more than once. The number of proxies will be determined in the following manner: 1. Directly as the square of the number of times married. 2. Directly as the cube of the number of wives living. Finally all ballots are to be examined and opened by myself.

Finally to answer your query as to whether the ladies shall be included, I dare them to bring them and take them back. (Signed) *Pete White, the Half-Cracked Miler.*"

CHANGES OF ADDRESS

C. S. Anderson, 4335 Dakota Street, Pittsburg, Pa.; Charles M. Barker, 1133 Henry Building, Seattle, Wash.; Francis G. Cooke, 37 Court Street, Bath, Maine; Ralph S. Damon, 195 Eliot Street, Milton, Mass.; M. S. Dennett, 1438 Washington Boulevard, Detroit, Mich.; J. Howard Dunlap, 907 Bloomfield Avenue, Akron, Ohio; Kenneth Greenleaf, 1608 Taylor Avenue, Detroit, Mich.; Wesley T. Jones, 58 Avon Street, New Haven, Conn.; William H. Maryin, A. T. & T. Co., 195 Broadway, New York City; William J. Orchard, 26 Salter Place, Maplewood, New Jersey; Lester W. Perrin, 18 Exchange Place, New York City; Richard H. Ranger, Radio Corporation, 233 Broadway, New York City; Webster Richardson, Care of Bond & Goodwin, Los Angeles, Cal.; Maurice R. Thompson, Care of Bureau of Standards, Room 109, Chemistry Building, Washington, D. C.; H. R. Tisdale, Care of New England Homespun Silk Corporation, Newton Upper Falls 64, Mass.; Mrs. Mayo Tolman, Ossining, New York; Hubert S. Smith, Care of Michigan Pipe Company, Bay City, Michigan; S. C. Willis, Care of Stone & Webster, Box 828, Detroit, Mich.; Erving M. Young, Room 332, 316 Huntington Avenue, Boston, Mass.

1913

F. D. MURDOCK, *Secretary*, 230 Chandler Street, Buffalo, N. Y.

R. C. THOMPSON, *Assistant Secretary*, 120 Milk Street, Boston, Mass.

Carrying out the program which Charlie Thompson laid out for Class activities we held a smoker at the Walker Memorial Building on March 25. Plans were discussed and it was decided to have another meeting in April in some downtown club. In May Charlie hopes to arrange an outdoor affair and have the ladies along.

Frances Glidden was born on December 17, 1920, too late to have notice appear in the January REVIEW.—Gordon Taylor, XIV, played the part of blushing groom last December, when he was married to Miss Helen Stutzer of Brooklyn.

The secretary had a pleasant visit in January from Mayo Tolman, XI, who is working for the Metropolitan Life Insurance Co., doing public health work. Mayo intends to return shortly to Boston where he will study for the degree of M.D. at Harvard.

Our Class was well represented by four men at a joint meeting of the Niagara Falls and Buffalo Technology Clubs in March. Bill Flanders, I, helped his Niagara Falls bowling team to win by offering to be excused from participation in the match. Bill's place was taken by a chap who bowled seventy and thus the day or rather evening was saved for Niagara Falls. Bill is office manager for the Hooker Electrochemical Co. — Ross Sampson, II, was rooting for Buffalo. He is with the Lumen Bearing Co., brass founders. — E. Mangan and F. Murdock completed the '13 quartet.

To supplement these very brief notes we are glad to have a little padding material in the shape of a letter which Charlie Thompson received from the secretary. "I notice that as the years go on the length of our news column in the REVIEW becomes shorter. I was particularly impressed by the brevity of the January notes. Maybe the secretary has no time to use the third degree methods which possibly are required to extract news. However I am one of those public spirited chaps who takes some of the blame himself and who realizes that I personally share the responsibility of 'chipping in'. Here goes: At the plant where I work we make cotton yarn and heavy, woven cotton webbings and beltings. Cotton is now selling at about its pre-war value, so you can imagine that business is not very brisk. However, we manage to keep enough hands employed so that we can at least begin to renew our help's acquaintance with an honest to God day's work. Most of them seem to think that it is not half bad. Our economic thought is given to the indulgence of our indigestion over the situation that calls upon us to exchange our textile dollars made up of one hundred 1913 cents for a building trade or machine builder's dollar which is still composed of fifty 1913 cents plus 100 per cent inflation. When that wrong is righted we feel that things will really move. That will not happen through talking optimism, but time will bring it about. I shall write to Bill Mattson who will bring the resources of the Babson organization to bear on the problem of stating the time when this adjustment will be fairly complete.

When I stack up the papers on my desk to make it appear to superiors and subordinates that I have taken care to finish all my work before leaving the office, I retire to my very small farm, consisting of one and one-third acres located in the suburbs of Buffalo. Here I indulge in my hobby of raising what the poultry men call 200-egg hens. It means a hen which has a record of laying 200 eggs in her first laying year. I am raising winter-hatched chickens, from which I hope to get the rarest eggs of all, those laid in the fall. I have come to the point of familiarity with the genus hen that I can surely detect whether she is laying or lying when she cackles. I have collected sufficient practical experience information so that I shall shortly publish brochures on the following subjects: 'How to overcome the weed problem,' 'How to keep the grass green without watering it' and 'How to keep a beautiful lawn without a lawn mower.'

In the evening I amuse(?) my wife by what seems to her the considerable feat and which is really a simple trick of reading the newspaper intelligently while still carrying on a lively conversation with her. Occasionally we attend the movies. The music is very sweet at our neighborhood movie house, the seats are comfortable, the pictures without Charlie Chaplin are average. I have no incentive to keep wide awake, so I find it a very comfortable place to doze.

You can see that my problems and pleasures are simple in the extreme. I will dare any of our classmates to write a letter of greater simplicity. In the old days Harry Peck accepted any kind of a dare. I wonder if he has lost his pep."

1914

H. B. RICHMOND, *Secretary*, 12 George Street, Medford 55, Mass.

G. K. PERLEY, *Assistant Secretary*, Hill Side Terrace, Belmont, Mass.

LUNCHEON, First Tuesday of each month

12.30 P.M. sharp, Boston Tavern, 347 Washington Street, Boston.

The increasing popularity of the monthly luncheons being held at Boston makes their continuation as a permanent affair a certainty. They are doing much to increase the

solidarity of the Class. One very noticeable feature is the forgetting of course and other groupings so familiar during our Institute days, and the establishment in their place of a real spirit of friendship. It is to be regretted that more of the Class are not near Boston so as to be able to attend these luncheons. Some new and interesting feature develops at each meeting. In January Pat Adams livened the meeting by bringing with him his mascot, "Bunney." E. C. Crocker tells us that his wife finds him so good-natured on the days after he attends these luncheons that she never fails to remind him of their dates. This is a hint to the wives of other fourteeners. The smallest attendance at the luncheons during the past quarter was twelve, so it is evident that there are always enough present to make attending these meetings well worth while.

The following fourteeners have registered at these luncheons during the past winter: Adams, J. H. Currier, II; Petts, II; C. H. Wilkins, II; H. S. Wilkins, XIV; Fiske, II; Waitt, V; Corney, VI; Tallman, VI; Shepard, VI; Ahern, I; Harper, IV; Whitten, IV; Hardy, I; Dunn, I; Des Granges, IV; Atwood, XIV; Downing, II; Ricker, VI; Crocker, XIV; Storke, II; Sherman, IV; Charm, VI; Walsh, I; Gallene, I; Luce, IV; Merry, I; Blakeley, II; Perley, VI; Richmond, VI. These thirty represent sixty per cent of the active fourteeners in Greater Boston.

The last meeting of the year will be held in June and it is expected that these few remaining meetings will have a larger attendance than any during the winter.

The attendance at the annual alumni dinner on January eighth was not as large as that of last year when the Endowment Fund Drive was terminated. Nevertheless those attending this year enjoyed a very entertaining evening. 1914 was represented by Judge VI; Fiske, II; Devine, II; MacKenzie, II; W. H. Warren, II; Stump, II; and Richmond, VI. Course II certainly deserves the credit for getting its members out. It often looks as if the Institute consisted of only Courses II and VI. Jimmy Judge came in from Holyoke to attend the dinner. Considering that Jimmy had only been married three months, we think that the distinguished service medal belongs to him. Malc MacKenzie also came halfway across the State from Southbridge to be present.

A very sad letter has been received by your secretary announcing the sudden death by cerebral hemorrhage of Howard Walcott Treat, II, at Buffalo, N. Y. on September 5, 1920. Howard was attending a house party over Labor Day. On Sunday morning he remarked to Jack Rankin, '13, who was also in the party, that he was "feeling fit as a fiddle." Very shortly afterwards he developed a severe headache which grew so alarmingly serious in a short time that Rankin telephoned for a physician. Before the physician arrived, Howard had developed convulsions and in less than two hours had passed away. At the time of his death, he was employed by the Pierce Arrow Motor Car Company at Buffalo. Interment was at his home, Fremont, Ohio.

Our society column for this issue is very short. C. H. Wilkins, II, has sent in the details regarding his recent marriage. The happy event took place on October 2 at Wollaston, Mass. The bride was Miss Bertha M. Given of Wellesley, 1914.—From the almost total absence of wedding announcements received by your secretary, he is led to believe that Cupid must be boycotting 1914. The stork, however, makes occasional calls. L. A. Wilson, XIV, announces the arrival of Duncan MacIntyre Wilson on December 1, 1920, at Palmerton, Pa. Pennsylvania must have been the territory covered by the stork in December because the following notice has also been received. "A second son, Samuel Shannon Duff, was born to Levi Bird Duff, III, and Marion (Shannon) Duff at Bellevue, Pa., on December 31, 1920."—"Al" Devine, II, has sent in word of the arrival of a son, James V. Devine on July 23, 1920. Al also has a three-year-old daughter.

When Alden H. Waitt, V, is quiet for a long time, we always know that he has some surprise in store. This time it is an eight-pound daughter, Betty Alden Waitt, born on January 22. To celebrate the great event, Alden signed up with the regular army as a first lieutenant in the Chemical Warfare Service.

Several very interesting letters have been received during the past quarter. The one from C. H. Ober, I, contains so much of interest that I am copying it in its entirety.

"It seems like delving into ancient history to answer your letter written last year. It arrived at a time when everything happened at once: My return to the States, the wedding and a change from my work with Dr. Rice back to the Coast and Geodetic Survey. Since then, we have jumped from one place to another at frequent intervals: Delaware Capes, Beaufort, S. C., Savannah, Ga., Charleston, S. C., and finally here. The vessel has been doing combined operations: Triangulation, topography, launch and ship hydrography

out to the 100-fathom curve. To go back to the cannibal-killing episode is a trip of one year into the past — January, 1920. I had considered that cannibals and pirates were characters belonging in fiction, but the specimens we encountered on Dr. Rice's Amazon and Orinoco trip were genuine "hard-boiled" cannibals — they even made signs with their teeth and hands to show us what they wanted to do to us. It meant a fight, and I must confess that shooting at cannibals is found to give any one a thrill, if everything turns out O. K., as it did in our case — no injuries on our side, merely narrow escapes. We returned to the States with data for an accurate map of the area covered and with other data of scientific value. As topographer of the expedition, I enjoyed the work and the trip immensely."

Chet is now back with the United States Coast and Geodetic Survey and is stationed on the "U. S. S. Bache."

The following extract is from a letter of A. G. Borden, I.

"Much has happened to me since I saw you last and things are not yet really in a position to report settled. I have taken a fling in a brass foundry and when that shut down from the hard times I succeeded in locating my present place, which is at the Edison plant in West Orange. The great and wonderful thing about it is that I report and am responsible to Thomas A. himself and to no other. It is no use to describe my duties as they may change at a second's notice. My title is that of inspector and I guess that will do as well as the next."

Max Keezer Trufant, I, is still up to his old tricks, as is indicated by the following letter:

"I received a letter from you some months ago saying that the check I now enclose would be welcome. But I simply haven't had that five until very recently. You see, I am so far from civilization that the high cost of living just hit us a few months ago. I determined to help the old crowd out if possible, and sold all my clothes (no drill suits, however) but it was not enough. I finally raised the money by selling a bottle of medicine for a sick friend to the "Handsome Mr. Sampson from Hanson" (1914), who is on the same job here. It sure will be a sad day when prohibition gets down here. I am frequently reminded of the senior picnic. My office is three miles from the river and Mexico, which is as wet as bandmaster Brooks is dry. I do not claim that I can drink their brand of wetness, but it is very useful in case Lizzie runs out of gas. Please decide a most important question for me: I am thinking of coming north next spring and am interested to know if there is a card-room in the present substitute for the Tech Union. I wish to decide whether to provide for it in my itinerary — that's me. — An Itinerant Engineer, *Russell A. Trufant*. — P. S. Keep your receipt — they haven't delivered mail here since Harding was elected!"

Jack Giffels, II, has been located in Brooklyn, N. Y., and in reply to a request for an explanation of his recent wanderings he replied as follows:

"In reply to your letter of the eleventh, will say that I have been employed by the Robert Gair Company of Brooklyn, N. Y., as assistant mill engineer, since January 1, 1920. Previous to this time I was employed by John A. Stevens of Lowell, Mass., and the Federal Paper Board Company of Bogota, N. J., as mechanical engineer. My present position takes me into several of the States of the Union, as we have a large paper box factory in Brooklyn, N. Y.; paper-board mills in Haverhill, Mass.; Montville, Conn.; Piermont, N. Y.; Chicago, Ill., and a straw-board mill in Quincy, Ill., as well as outside paper mills for which we serve as consulting engineers. I have been located at our Brooklyn office since December 15, 1920, but so far have not met any Tech fourteeners. In closing, will say that my name is still in the column headed 'Delinquent Bachelors' with capital letters."

R. D. Bates, XI, still enjoys West Virginia scenery as is indicated by the following extract from a recent letter:

"Must apologize for not answering your note of November last before. Yes, I have left the State Department of Health of West Virginia and am in charge of the Filtration Plant of the Clarksburg Water Board. Clarksburg isn't a bad town to be in for a few years anyway, and this section of the country is just full of opportunities for sanitary engineers and Course VII men."

L. M. Richardson, I, who is with the Aberthaw Construction Co. has been transferred from their Boston office to Atlanta, Ga. — Bill McPherrin, II, is at Cincinnati as assistant to the plant superintendent of the Ivorydale Works of Procter & Gamble. Prior to this assignment, he was in Dallas, Texas, in charge of installing equipment at their new

plant.—E. C. Luce, IV, is in charge of the Industrial Department of the New England Structural Co., at Boston.—Vic Galleni, I, is managing to keep busy as New England manager and district engineer for the S. M. I. Engineering Co. His headquarters are at Boston.—H. V. V. Fay, IV, returned last fall from Vladivostok, Siberia, where he was in the Intelligence Section as a captain of engineers and is now with MacKay & Co. of New York City.

The Tech recently contained the following item in reference to J. E. Wood, IV:

"Lieut. John E. Wood, Engineer Corps, has been named third assistant engineer commissioner of the District, Engineer Commissioner C. W. Kurtz, announced yesterday. Lieutenant Wood was graduated from M. I. T. in 1914, enlisted in the army in 1917, and went to France in the engineer unit attached to the Twenty-Sixth Division. He took his examination for a commission in the regular service in 1918, and for some time was associated with Colonel Kutz at Camp Humphries, Va. He later went into Germany with the Army of Occupation and returned only recently. He will take his new position as soon as formal orders have been issued."

"Boggs" Morrison, II, has left the Scovill Manufacturing Co., and is now with the Steel and Tube Co. of America at Evanston, Ill.—E. E. Murphy, I, who is a captain of the Coast Artillery Corps of the regular army has been transferred from Fort Terry in Long Island Sound to the Great Lakes District.—S. W. Stanyan, VI, is enjoying life riding around California inspecting transmission lines for the Pacific Gas and Electric Co. He is with the North Bay Division with headquarters at San Rafael.—N. E. Baxter, II, who is with the Baldwin Locomotive Works has been transferred from the Philadelphia Works to the Chicago office.—F. E. Dunn, I, is rapidly recovering from a severe illness contracted while with the Tacajo Sugar Corporation in Cuba. Frank has been obliged to give up all work for nearly a year and is now looking around for an opening for a high-grade civil engineer.

Do not forget, fourteeners, that the way we can keep this column going is to have every member of the Class write the secretary at least one letter a year. Have you written your letter yet?

ADDRESS CHANGES

F. L. Ahern, I, The Breakers, Lynn Shore Drive, Lynn, Mass.; N. E. Baxter, II, Care of Baldwin Locomotive Works, 627 Railway Exchange, Chicago, Ill.; H. G. Borden, I, 106 Park Avenue, Orange, N. J.; B. P. Crittenden, II, 468 Belmont Street, Watertown, Mass.; D. R. Dixon, XI, Claremont, N. H.; H. V. Fay, IV, Care of MacKay & Co., 14 Wall Street, New York City; H. L. Gardner, I, 329 Park Street, Bakersfield, Cal.; J. E. W. Giffels, II, 459 Seventh Street, Brooklyn, N. Y.; E. C. Luce, Jr., IV, 132 Central Street, Somerville, Mass.; W. L. McPherrin, II, 3991 Parker Place, Cincinnati, O.; H. A. Mayer, XIV, 114 Sansome Street, San Francisco, Cal.; R. E. Merry, I, 6 Radcliffe Road, Allston 34, Mass.; H. A. Morrison, II, Care of Steel and Tube Co. of America, Evanston, Ill.; E. E. Murphy, I, United States Army Mine Planter, "Col. Albert Todd," Milwaukee, Wis.; C. H. Ober, I, Care of United States Coast Survey, Washington, D. C.; M. I. Omansky, XI, 79 Revere Street, Boston, Mass.; Robert Parsons, VII, 55 Hanson Place, Brooklyn, N. Y.; A. F. Peaslee, I, 5 Grant Avenue, White Plains, N. Y.; R. W. Peatross Jr., II, 521 Two Republics Building, El Paso, Texas; L. M. Richardson, I, 472 North Boulevard, Atlanta, Ga.; E. S. Shurtleff, III, Pikeville, Ky.; E. E. Snyder, X, Care of Semet-Solvay Co., Syracuse, N. Y.; S. J. Spitz, X, 1116 Prospect Avenue, Milwaukee, Wis.; S. W. Stanyan, VI, 301 G Street, San Rafael, Cal.; G. S. Stevens, VI, Care of Morrison-Stevens Co., 8 Beacon Street, Boston, Mass.; C. F. Thompson, III, 1217 Brown Street, El Paso, Texas; F. W. Williams, XI, 26 Pearl Street, Springfield, Mass.; W. H. Warren, II, 38 Cliff Street, Arlington Heights, Mass.

1915

FRANCIS P. SCULLY, *Secretary*, 70 West Chippewa Street, Buffalo, N. Y.

HOWARD C. THOMAS, *Assistant Secretary*, 34 Floral Street, Newton Highlands, Mass.

Since the last Class letter was written in December, many things have happened of interest to the Class. First came the annual alumni banquet at Walker Memorial on

January 8. The representation from 1915 was very small and it seems too bad that at the annual meeting of the Alumni Association that there were only ten men from 1915 present. These ten faithfuls were: N. S. Klink, C. T. Blackmore, Paul W. Weymouth, P. J. Munn, C. M. Runels, Daniel J. Danker, R. Loring Haywood, A. S. Morrison, William B. Kelleher, and H. C. Thomas. The addresses by Dr. Robert Bruce Taylor and Prof. Burgess Johnson were very inspiring and should be read where they appear elsewhere in the REVIEW.

In order to stir up interest among the 1915 men in greater Boston and vicinity, the monthly luncheons spoken of in the last REVIEW were started Thursday, January 20, at the Boston Tavern. These luncheons will be held regularly on the third Thursday of every month at the Boston Tavern from twelve to two. At the first luncheon thirteen men appeared and at the second we had seventeen. For the meeting in March it was decided to hold it in the evening instead of at noon in order that more men who were unable to be present at noon might come. Those who signified their intention of coming were: Henry Sheils, Gus Caffrey, A. W. Mack, Louis Young, B. E. Adams, Walter Metz, B. H. Kerstein, R. Loring Haywood, Paul Weymouth, H. W. Brown, M. B. Kaufmann, J. Ginsburg, Frank Murphy, C. T. Blackmore, Leslie R. Sears, Carl Wood, Roland Baldrey, Clive Lacy, E. L. Sullivan, Red Rooney, Waldo Pike, N. S. Klink, Horatio Lamson, Seward Highley, R. V. Josslyn, and the assistant secretary. Clive Lacy and Carl Wood cancelled and seven of the others failed to show up. In spite of this a mighty good time was had by all there. A good dinner was enjoyed and then each man offered suggestions and ideas to build up the Class spirit and then told what he had been doing lately.

A. W. Mack is with the Ross Machinery Co., Quincy, on foundry work. He travels about quite a bit and sent his regrets for the February luncheon from New York. — A. Hamburg, who is owner, president, treasurer and secretary of the Superior Engraving Co., reported a very prosperous business. His work is classed among the best in the city. — R. P. Josslyn says that he has strayed far from chemistry and has charge of a storage warehouse for a wholesale grocery concern. — N. S. Klink is still one of the standbys at Charles T. Main's, where he has been working on the big American Sugar Refinery at Baltimore. — Horatio W. Lamson gave a very interesting account of his work during the war and since with underwater listening devices. We would repeat here what Horatio told us but he has consented to write us a good story about his work so that we are assured of something interesting for the next REVIEW. — C. T. Blackmore, after roaming around the country is now with Stone & Webster on electrical development. Wallie Pike is, as ever, at Fay, Spofford & Thorndike's. Wallie, like all the others connected with engineering firms, reported things very dull at present but bright hopes for the future. — H. W. Brown, who was assistant to Professor Haywood in testing materials laboratory the first year after graduation, spent two years in the service — one and one-half years in France. He earned a fellowship at the University of Wisconsin and was instructor there when the war broke out. He is now with the Housing Company, Boston, doing research work in the different types and styles of houses. — R. Loring Haywood, who started in business for himself in 1915 in Taunton has worked up quite an extensive business in civil and landscape engineering. He gets all kinds of work, from designing foundries to laying out estates. Roy says that he has many slides of his work at Panama on the boundary commission and has kindly offered to show them to the fellows some night. We are going to take advantage of his offer soon. — Seward Highley, who spent several years in Ontario where it would be 104 in the shade and still you could drive a crowbar down to frost, told of his interesting experiences in the wilds. His company was building a pulp mill, also the town hall, post office, grocery store, school house, jail, and saloon — in fact, he built a whole town. At present he is working on an experimental pulp mill at Sandwich, Mass., where they are going to try to get pulp from the scrub pine on the Cape. — Gus Caffrey is still with the Corrugated Bar Co., Boston. The principal thing Gus had to talk about was Andrew A. Caffrey, born October 2, 1920. Gus has been keeping this a dark secret up to now. — Henry Sheils, who is one of Boston's promising young contractors, spoke of his interesting experiences in building oil tanks in the third basement of some of Boston's big buildings, also of his work in constructing a new concrete arch bridge for the town of Framingham, Mass. — "Red" Rooney, who attended in a brand new pair of shoes, showed that the contracting game still has its advantages. George, after he left school, went to work on the subway tunnels in New York in compressed air. From that he jumped to Philadelphia, where he erected oil tanks for the Atlantic Refining Company. Then, one

night, by the flip of a coin, he decided to go with the H. W. Cooper Co., hydro-electric engineers. They sent him to Minnesota, but he couldn't stand being so far from Chelsea, so he returned to Bridgeport, Conn., to the United States Housing Corporation there. From there he went back with Cooper on a survey for the project of a continuous waterway from the Great Lakes to the Atlantic, but his work was still too far from Chelsea, so he married and came to work with the Scully Company, where he is now located. By the looks of the shoes we think that his last change was advantageous. — Frank Murphy has a very interesting job as cost engineer for the Boston Division of the New York, New Haven and Hartford Railroad. His work is to capitalize everything he can, therefore if they take out an old tie and put in a new one they can issue two more shares of stock through Frank's work. — J. Ginsberg, who has just returned to Boston from Beloit, Wis., where he was connected with the Fairbanks, Morse Co., told of his interesting experiences in the past few years. His work consisted of the design of Diesel engines, principally, and the well-known Fairbanks pumps. Previous to this he was with the Lehigh Cement Company, supervising the construction of a mammoth oil tank. His story of exploding two tons of dynamite in 40-foot drills was very interesting. As he has just returned to his home to be near his family he is not located in business here as yet. — M. B. Kaufmann, president of the Archer Strauss Company at Framingham, Mass., told of his work there. His company makes rubber fabrics of all sorts, and if any members of the Class are going to need in the future any rubber materials such as sheeting, he says he will supply them at a very reasonable rate. (Gus Caffrey and Wallie Pike say that they wish they had known of this sooner.) The assistant secretary is still with Lockwood, Greene & Company, engineers, at the Boston office, in the construction department.

So you can see that the dinner was very interesting and the time well spent. Any members of the Class who are likely to visit Boston should remember that some members of the Class will always be found on the third Thursday of every month, rain or shine, at the Boston Tavern, from twelve to two. It is suggested that luncheons similar to this be held in other cities where there are quite a few 1915 men. They serve a very useful purpose in reviving the Class spirit and in bringing the men together. If this suggestion is followed anywhere, kindly let us know, and we will give it due publicity in the REVIEW.

Now for news outside of Boston. The Class secretary is still in Buffalo. We receive monthly letters from him giving us the news he has picked up. His first letter enclosed a little card from Louis Zepfler announcing his engagement to Miss Marion Frances Bateman and on the back of the card it says: "Thought you would like to know I was doing my bit to give you your news items, Scull. The girl is from Norwood, a graduate of Fitchburg Normal and Boston Conservatory. I am still with the Standard Oil Co., N. J., lately turned engineer. Still waiting to go abroad. Best of luck. *Louis H. Zepfler.*"

Frank says: "Fred Cook, captain of the track team, dropped in to see me yesterday. He came to Buffalo about six weeks ago from Akron, receiving assurance from the Dunlop people that it would be perfectly all right for him to move his household goods. Monday the Dunlop plant shut down. This has been very unfortunate for a number of men who came to Buffalo only to suffer the same experience. However, Fred seems to like Buffalo and told me that in all probability he would stay here." Two weeks later came a letter from Fred enclosing the duplicate of a check which had been lost in the mail. He said: "We have gone through some harassing experiences during these last few months, but the sun is just *beginning* to break through the clouds. The Class news of the last REVIEW was enjoyed by the whole family." We hope that things will break still brighter for Fred.

Frank's February letter, leaving out part lest you think that we are conceited, said, "I have nothing much to report concerning myself except that we are plugging along up here and expect with the opening of spring that business will show a considerable increase. It looks to me as though I will be up here some time yet and cannot tell just now when I will be in Boston again. However, I am going to try to be home within a month and will call up at that time." His last letter, received March 15, is as follows: "I regret that I was unable to get in touch with you while home this last time, but the necessity of straightening out a lot of accounting for the Federal and State Income Tax while there, kept me pretty well tied up. (We aren't bothered that way at all!) I have not much news to report. I was down in Dayton two weeks ago and at that time talked with Les Morse over the phone. He is still flying and seems as enthusiastic as ever over the aviation end of the army. Albert Samson is at the University Club and is the only other '15 man that I have

come in touch with. I am hoping to get home Easter and will make it a point to see you at that time."

Arthur Bond writes on the letterhead of the Bond Construction Company, contracting engineers, New Haven, Conn.: "Please change my address on your records to 962 Chapel Street, New Haven, Conn." Up in the corner is "A. H. Bond, president and general manager." We wish Arthur all the success that there is in his new adventure.

We would feel a little easier if we got these adverse criticisms off our chest. We will submit them to you without further comment.

"St. Paul's School, Concord, N. H., December 13, 1920.

Dear Thomas:

I think your action in dropping off the list the names of men who don't happen to answer your ultimatums is too arbitrary by much. Even if certain men don't come across as they should, they are part of the Class and they and their doings may mean something to the rest. If there is going to be autocratic action of this sort, the records, etc., will soon lose their value, and personally I'm not going to simulate acquiescence with such doings: chop me off quick as you like. *G. Haslam.*"

The following card was received January 28, dated November 3:

"The questions on the reverse hereof are more categorical than I wish to answer. However you may classify Technology 1915 men, it will not alter the fact that they received Institute degrees in 1915. The maintenance of Class identity in any additional respects will depend upon circumstance and association. *Julius Kuttner.*"

These two cards have never been answered, as we were afraid we would say something we would be sorry for. If any one in the Class has any suggestions as to how to deal with these men we should be glad to receive them.

J. Harland Billings, Professor at the Drexel Institute, Philadelphia, writes: "Since I was at Tech only one year taking S.M. in '15 I was not associated with that year except on the records of the Institute. I thank you for your interest. *J. H. B.*" — Horace L. Clark, with the Chile Exploration Company, as field engineer in the construction department, sends the following from Chile: "Sorry this does not sound more cordial, but there is too long a jump between 1909 and 1915. I wish you luck anyway. *H. L. C.*"

R. E. Curtis wrote in December as follows: "Dear fellow classmate: Dalton tells me you are about to cross me off your mailing list. Well — don't do it — just change my address to the above (1416 Windrim Avenue, Philadelphia, Pa.) and maybe I'll get some of the dope you send. I haven't one of those data cards you sent out to round up the gang so I don't know what dope you want — but I'm married and settled, for a while at least in Philly. Didn't think much of the burg when I landed here but I've become more or less deadened to it now. I've just finished a term of employment for Stone & Webster on the Delaware Station job (for the Philadelphia Electric Co.) and am now permanently located with the American Gas Co. at Seventh and Locust Streets. I can't tell you what my official title is because I haven't any, and I can't tell you what work I'm in charge of because I'm not — being still in the embryonic stage here. If there's anything else I can do for you — shoot." — The card was sent and returned with the interesting information that he has a co-ed, born December 8. Congratulations! On the back of the card, under "remarks" he says: "Whoever designed this card ought to eat it. Nobody but a miniature engraver on platinum engagement rings could ever get the dope in the space allowed. Why permit the printer to throw so much bull and us so little?" Don't blame the printer for the cards as that was up to us but they did the trick just the same.

Frederick A. W. Davis, with the Aluminum Company of America, at Messena, N. Y., as technical supervisor of the production of the aluminum metal writes: "I suggest that local sections be formed within the different Technology Clubs of members of the Class of 1915, and wherever it is possible and said clubs are not in the vicinity that these local sections be formed anyway for the social and betterment end of the game. I am sorry to say there are only two other men besides myself in this vicinity — one 1915 and one 1920. *F. A. W. D.*" This is in line with what we are doing in Boston and is a mighty good idea.

Stewart W. Gurney writes from Philadelphia as follows: "Although I started with '15, after two years absence I came back and received my degree in '17, and have always considered myself of the latter Class. I believe I am enrolled in the Alumni Association as '17 rather than '15."

Bill Holway of the Holway Engineering Company, civil and sanitary engineers, Tulsa, Oklahoma, writes: "Wardle just came out to Tulsa to become a part of the Holway Engineering Company and got after me for not mailing you my card. Am as busy as hell and not much on writing. Best of luck to you. *Bill.*" Incidentally, Andrew promised us a letter on his experiences abroad but we are still patiently waiting for it. The Holway Engineering Company, from its letterhead, covers everything in civil and sanitary engineering. With Bill Holway and Andrew Wardle in it, the future of the company is assured.

Vitold A. Jasionowski, VI, sends his card and check from Buenos Aires, Argentina, saying: "I am a Buenos Aires representative of First National Corporation which has its head office on 30 Federal Street, Boston." If any of you are going to Argentina for the winter, his address is Bartolome Mitre 501, Buenos Aires, Argentina, S. A.

Parry Keller writes from Akron, O., that he is in the development department of the Goodyear Tire and Rubber Company. Under "Suggestions" he says: "Use your judgment, provided it keeps things alive and moving. A Happy New Year to classmates of 1915. *P. Keller.*" We would prefer that our own judgment be supplemented by something more definite.

Charles R. Lord, II, writes to the first card: "I received your questionnaire which you sent me on October 30 but have mislaid it, so I cannot reply to you on that, giving you all of the details that you requested. Furthermore, since I graduated in the Class of 1916 and have been paying dues in this Class since graduation, I consider that I am associated with that Class and not with the Class of 1915. However, since you state that it is not necessary to be graduated with 1915, and since I spent a couple of years in that Class and have the highest regard for some of the friendships which I formed and the associations which I made with members of that Class, I would quite naturally wish to keep up my relations, and if you will keep my name on your mailing list of the Class of 1915 I would be very much obliged. If you will send me another questionnaire, I will take care to have it properly filled out and returned to you. You are certainly to be commended for the good work which you are doing as secretary of the Class of 1915 and deserve the support of all its members. I sincerely trust that most of the members have been more punctual than I." The card was sent and we asked him to let us know what he was doing, to which he replied as follows: "It's so long since I have written my story that I am going back a little and bring it up to date. After graduation in 1916 I went to Europe for the Allied Machinery Company of America, and was with them in France and Italy until I entered the army August, 1918, a second lieutenant in engineers. I acted as representative of purchasing agent, American Expeditionary Forces in Turin, Italy. March 20, 1919, I married at Turin, Italy, Maria Florenza Azzeroni, and from then until June, 1919, I spent in a more or less interrupted honeymoon, traveling from Turin, Italy, through France (the various concentration camps) and England, and finally reaching America. Since that time I have been living in New York, at present at 82 Washington Place. I am still with the Allied Machinery Company at 51 Chambers Street, N. Y., engaged in exporting machine tools all over the world. On the sixteenth of August, last, Charles Rogers, Jr., and Frederick Waterston put in their appearance, and ever since I have been busy buying cribs and baby clothes. My long absence from America has resulted in my losing touch with my classmates to a large extent, which I greatly regret. I would be very glad to see any of the members of the Class that are in the vicinity of New York. Since graduating in 1916 have been paying dues with that Class, so I am not enclosing dues for 1915. However, as I cannot pay dues with both Classes I will be glad in case of special needs of 1915 to contribute to your treasury. *C. R. Lord.*"

Kenneth K. Boynton, VI, who has been lost to the Class for two years, finally writes from the International General Electric Company, 23 Water Street, Yokohama: "Dear Howard: Please find enclosed my questionnaire and also a check for \$2.00 to cover my Class dues for 1920-1921. I greatly regret that I have been unable to keep in closer touch with 1915, due to my frequent changes of address. It is hoped that I will stay put in Japan at least long enough for you to enter my present address on your records. I certainly do wish to retain my affiliation with the Class of 1915 and only regret that the long distance makes it impossible for me to attend any of the gatherings. It would not appear that I can be of much assistance in keeping 1915 alive, but you may rest assured that should I ever locate in Boston I will endeavor to take a more active interest in the Class affairs. With kindest personal regards, *Kenneth K. Boynton.*"

Maurice F. Brandt gets out the old pen and scratches off the following: 29 Belmont

Circle, Trenton, N. J. — "Dear friend Thomas: In view of your recent campaign for 1915 it occurred to me that you would be interested in having the information contained in the enclosure. Better late than never, but *better* never late. We are now living at the above address. You should have received one of these in appropriate time — it being my first experience I was guilty of some omissions that I very much regret. I am certainly very much interested in your plans for '15. You and Spencer deserve much credit for the great amount of work you have done and are planning to do. I am with you for all that I can do. Sincerely yours." (I guess that Maurice has forgotten that Bill Spencer resigned his office last June, but Bill deserves credit for the work he did while in the office.) The enclosure referred to announces the marriage of Miss Ella Cuttino Adams to Mr. Maurice Frankland Brandt, on Thursday, June 24, at Sandersville, Georgia.

The following letter was received from Paris. American Locomotive Sales Corporation, 30 Church Street, N. Y. (Paris). "Your index card received in such bad shape that I have had to make out a new one. You will be able to copy it in your office. Enclosed please find my check for \$2. Very truly yours, *McCeney Werlich, 3 Rue Tailbout, Paris.*" Too bad that McCeney didn't take a little more time to tell us of his experiences in France during the last three years.

I suppose life in the navy has made Henry get some official dignity in writing letters, hence this formal communication, although Henry warms up a little toward the end: Public Works Department, Naval Operating Base, Hampton Roads, Norfolk, Va., "Receipt is acknowledged of your postcard of recent date referring to a questionnaire alleged to have been mailed to me on October 30. I cannot recall having received the papers in question, and I have failed to find them in looking through my papers. If you care to send me a duplicate set I will be glad to consider them. As for the last sentence of your card, you may take such action as may appear to you to be appropriate under the circumstances. I have often wondered what has happened to some of the members of our Class. Of course I remember that you are married and that you were employed somewhere around Boston, but since the war I have learned very little. I have been in the navy and in this location for almost three and one-half years, and have enjoyed my experiences very much. I also have been married and now have a little son about four months old. If you have a few minutes let me have a few words from you. With kindest personal regards." The card requested was sent and later returned with the ever welcome check. We are glad to hear that Henry has a future Tech graduate in his care.

From Los Angeles we get the following: "I know you will excuse the delay in returning the enclosed blank and check as said delay has been largely caused by a 50 per cent increase in my family in the person of Robert Ayers Stringfield, born December 1. The youngster is sure a husky, and as he has already met several Tech men, should be starting out right. Don't be too rough on any of the fellows out here who don't come through with their dues, as Boston seems a pretty good ways off when we don't get back very often. The Tech colony here is growing, however. Bill Mellema, IV, landed here last summer and has been busy ever since. His address by the way is Loomis Apartments, 625 Loomis Street, Los Angeles. Bob Haylett, X, who is chief chemist for the Union Oil Company also moved here from Berkeley about two months ago. The Goodyear plant brought out B. Darrow, VI, '11, as manager of technical division and R. P. Dinsmore, X, '14, as chief chemist, and I have been with them several months as chemical engineer. If any '15 men stray out this way, I hope they'll be sure and look me up, and if I can do anything for you out here let me know. Best wishes and Merry Christmas. Sincerely yours, *R. B. Stringfield.*"

A short note from Lloyd Chellman, I, says: "Greetings, Howard, Sorry to be late on the dues, but you know — large wife and small family! *Lloyd.*" We are glad it isn't a large family and small wife for Lloyd's sake. Lloyd is still with E. Worthington, civil engineers of Dedham.

H. L. Marion, VI, sends the following from Europe where he is European manager of the North American Copper Company. "Left New York on the S.S. 'Imperator', August 12, 1919. Since then I have been in England, Holland, Germany, Belgium, and France. Spent two months in England and two months in Germany. Am now in London but leave next week for Brussels. It's a great life. Mail addressed to our New York office will be forwarded."

F. E. Parsons, II, who manufactures socket wrenches, writes: "Dear Tommie: Excuse my negligence, but I have been trying to get started in business for myself and these are certainly trying times to do it."—K. W. Roy, II, who is with the Turl Iron and

Car Company, Newburgh, N. Y., writes: "Sorry I am late. Didn't get a card until Hall called me up. I have changed address as shown hereon, though still with same concern. Nothing much to report."—R. A. Schmucker, III, sends his card from Chile, where he is mining engineer with the Braden Copper Company at Rancagua.—R. P. Sherman, XIII, writes from 1 Route Voyron, Shanghai, China, where he is naval architect with the Standard Oil Company of New York. We are glad that he sent American money for his Class dues instead of a couple of carloads of Chinese Yen.

E. S. Tisdale, II, who is chief engineer for the State Department of Health, Charleston, W. Va., announces under "number of children" — "one girl, 4 months." Under "remarks" he writes: "My only remarks are commendatory for the business-like way in which you are attacking this problem of waking up the fellows and keeping 1915 alive. I'll do my best to co-operate. Being secretary of the West Virginia Engineers Association, I know some of the troubles you must have trying to get answers to your letters and requests. Will write you a real letter in a few days telling of some of my doings during the last year or so. Remember both Florence and myself kindly to your wife. Sincerely, *Tis*." Tizzy must be still having his troubles because his "real letter" hasn't been received as yet.

R. W. Wetherald, who is in Boston, reports: "Sales manager for Chester Kent & Co., manufacturing chemist, veriol, etc., president of Comfort Powder Co. and vice-president James T. Wetherald advertising agency. What I am doing mostly is *Work*." Outside of that we suppose he has nothing to do.—Roland W. Baldrey, IV, who is with Allen & Collens, architects, Boston, writes: "Am sending \$2.00 for dues. I cannot say much about myself except am thinking seriously of going abroad next summer on the traveling fellowship — won my fifth year at the Stute. Will let you know of any definite move. I cannot say anything about P. Keller, although I think his family is in the vicinity of New York City."

Otto W. Hilbert, II, after asking for a few addresses, says: "I wish I could give you more Class news but unfortunately I am located in a small city away from the beaten paths and seldom come in contact with any of the members of our Class. Please remember me to any of the fellows you meet." Otto, by the way, is in Corning, N. Y.—From New Haven, we received the following: "I do not seem to have received the questionnaire referred to in your postal of January 26. I started out as 1914 but graduated with '15, so I guess I belong to the latter Class. If you'll shoot along another questionnaire to the above address, I'm sure it will reach me. Yours very truly, *Gale Shedd, Jr.*" (The questionnaire has been "shot" but hasn't been returned as yet. We'll have to give Gale a jog.)

From the same general locality we received the following from G. Maconi, I: "West Haven, Conn. Dear Howard: I received your letter yesterday and was very glad to hear from you. If you will send me the names of the other fellows who haven't come across, I will do my best to get them to forward their checks. I hope you Bostonians will see fit to come to New Haven, some day. If you did, you would be given a fine time and would boost 1915's cause. I will expect Mr. and Mrs. H. C. Thomas to pay me a visit some day. So you want to know more about me! Well I haven't changed much, old boy. I work (hard) every day at this contracting game. I have charge of the estimating for this corporation. The corporation was founded four years ago. I started in with the firm at that time. We specialize in building construction, but have also done some bridge and underground work. We expect to branch out considerably this coming year. Well Mr. H. C., tell me about yourself. Best regards, *Mac*." Mac seems to be in real earnest about the Class meeting in New Haven some day. It was mentioned in the last Class REVIEW but nobody has spoken about it. Speak up and give us your opinion; as New Haven is between Boston and New York, it would seem that his suggestion deserves some consideration.

To those of us who remember our freshman field day, the following, clipped from the Boston Herald, February 20, will be of interest. — "Former Actress on Honeymoon. Mr. and Mrs. Lyons Will Make Their Home in Brookline. Mr. and Mrs. Henry Brendon Paul Lyons of Brookline who are now on an extended honeymoon trip, will make their home on Thorndike Street in that town when they return. Mrs. Lyons, before her marriage on February 6, at the Holy Cross Cathedral, was Miss Elizabeth Norton of Brookline, daughter of Mrs. Scott Fitz Bickford for a former marriage. Mr. Lyons attended the Brookline schools and later the Massachusetts Institute of Technology. He served as lieutenant in the army and is now New England representative of an English steel concern. Mrs. Lyons has been prominent in amateur theatricals and is a former member of Green-

wich Village Follies." From the accompanying photograph we are assured that Brendon made a good choice.

From Lincoln, Me., we received the following: "Dear Thomas: Last month I received from you a card relative to a questionnaire sent to all 1915 men. I remember seeing such a questionnaire, and it is my impression that I returned the same to you. However, at that time, Mrs. Hall and I were moving into one of the company's new bungalows, and it is quite possible that the questionnaire may have been mislaid. I shall always want to be numbered among those of 1915, and I sincerely trust you will keep my name on the mailing list. I am sorry I am not so situated that I can attend more of the 1915 functions, but my interest is there just the same, if I am way down in the Maine woods. Sincerely, *Alfred E. B. Hall.*" The card was sent and later received with the W.K. check.—From 17 Dana Street, Cambridge, the following note was sent us: "Sarkis M. Bagdoyan is in Armenia now I suppose. I have had no word from him since he left Cambridge for New York, from which port he was to sail for Armenia some months since." We hope that Sarkis will write us after he gets settled in Armenia.

To bring this letter to a close we are giving intact one of the most interesting letters we have received. It is from Hovey Anderson, more popularly known as "Andy." If the rest of the fellows would take a few minutes and write us as he has done we might have some news for the Class letter once in a while. He gives his address as Zacapa, Guatemala, Apartado, 12, Dept. de Ciquimula. The letter itself was sent from one of the way stations on his path, San Jacinto, and was dated, January 4, 1921.

"Dear Tommie: Received your note yesterday and I sure was glad to hear from some one up that way. Les Morse is about the only one of the old roughneck crowd that ever leans on a pen to write down this way. Heard from him recently and he told me how he met Larry in Boston and that Larry had a family. I had even lost track of old Red-head Rooney till Les located him up there in Cambridge; where the rest are I do not know.

I have wandered far from home in the past year after five years in quiet old New York. Came down here out of the cold winter a year ago last November with the United Fruit Co. and if you have any enemies send them down here to work for the honorable gentleman in charge of the Guatemala division. I lasted there eight months and then blew up and drew my first blue slip since I have been out of school. I figure that I'm better off at that. Was working down there in the swamps laying out banana farms and tramways. Most of my work though was fighting mosquitoes and wading around in mud. Not the best or healthiest place in the world, but I had my usual good luck with regards to my health, just as hard and as tough as ever.

Was figuring on coming home when I got through down there but landed a job here the day after, so here I still am. Not bad, but I long for the quieter life up home and that 'wife' of mine that you met four or five years ago. I'm working on the new railroad survey from Zacapa, Guatemala, to Santa Ana, El Salvador. Only one party on this and so we run the preliminary and then bring the location up behind. There's another crew working over in Salvador. I got in at the start here and have been with them all the way, we are fooling around the twenty-five mile marks now and that's half way to the border. Pretty rough country for railroading here and as we have to do some climbing and are out for the least amount of dirt to be moved as possible we get some pretty good curvature. No plowing the big cuts here, we work around them and get by as lightly as we can. We've climbed from elevation six hundred to fifteen hundred in the first twenty-five miles so we are also working up in the world away from those Fruit Company Swamps. Good country for about five miles out of Zacapa and then we hit a canyon and believe me, boy, that was rough landing on to those cliffs on all fours. Along by Chiquimula, mile fifteen, we ran along some flats and are just now getting into the rough stuff again.

Guatemala grows about everything, plenty of bushes with prickles, also nettle and all kinds of cacti. Most fences are cactus or some kind of a thorny hedge. We've been through corn fields, sugar cane, bananas, lemons, oranges, cocoanuts, and now we are getting up into the coffee country. You'll find corn everywhere; there is many a nice farm stuck up on the side of a 60 degree mountain or better, and they plant them away up to the peak. Corn for the tortilla is the main food of the country. Black beans and tortilla is a banquet for a native. The coffee is good stuff to run line in, it is low and as it is valuable we don't like to cut it and make enemies so we do some nice crawling along the ground.

I'm doing about everything trying to be useful — have been peeking through the

transit most of the way though. Don't know what more I can write of interest. I've been in the Capitol, Guatemala City. It was ruined by a 'quake in '17 and is still pretty much of a ruin. The towns in the line are old dumps excepting Zacapa and Ciquimula, which contain more white-washed mound houses than the others. San Jacinto is some dump. We have our camp pitched just the other side of it and it's somewhat a reminder of the old summer camp.

Great climate up in this part of the country, summer all of the time and we've only had one rainy day since I have been up here. Plenty of wild women, cushioned, tired and dressed like a Gaiety chorus and they don't believe in Prohibition here either.

Haven't any real money, only native monkey money but will have my mother send \$2.00 in real cash. Two dollars in gold here is worth ninety *pesos pais* and you couldn't pass \$90 Guatemalan money to a blind bartender up there.

Don't mind it but I'm tiring of the working, eating, and sleeping combination and have a sneaky feeling that I'll be up North when you have this kind of weather that I'm having here. Ever hear of Dinger Doane? Drop a line, Tommie, but don't send the two-cent stamp as these people here only know good old \$1.00 bills. 'Scuse pencil and remember me to everybody. *Albert H. Anderson.*"

The following announcement was received at the REVIEW office recently: "Mr. and Mrs. William Mattern announce the marriage of their sister Miss Minnie Mattern to Kenneth Desprès Kahn on Saturday, the twelfth of March, nineteen hundred and twenty-one, South Bend, Indiana. At home after June first, Los Angeles." Mr. Kahn of the Class of 1915, Course X, is president of the S. H. Kahn & Co.

The Batavia Service Corporation, 29 Broadway, New York, in announcing the organization of an engineering staff stated the following regarding Dean A. Fales, II:

Mr. D. A. Fales, a graduate mechanical engineer is specializing in internal combustion engines, particularly as regards their application to the automotive and aeronautical industries. In addition to his own consulting engineering practise Mr. Fales established and conducted the aeronautical engine department at the United States Army School of Aeronautics at the Massachusetts Institute of Technology where he also organized and acted as the head of the Seaplane Motor Department of the United States Naval Aviation Detachment. Mr. Fales, now Director of Education of the Motor Transport Training School at Camp Holabird, Baltimore, Md., has invented and designed several radical improvements on internal combustion engines for the automotive industry.

1916

C. W. LAWRENCE, *Secretary*, 85 Islington Road, Auburndale, Mass.

E. H. CLARKSON, JR., *Assistant-Secretary*, 412 Main Street, Charlestown, Mass.

The good ship Nineteen Sixteen, hailing from Cambridge, Mass. (near Boston), is again in commission, fully manned and officered, loaded with a cargo of pep and bound on a cruise around the world to re-establish connections between old pals and shipmates. Here is one of the first entries in her log:

"Thanks to the aggressiveness of half a dozen members of the Class, notably Chuck Loomis, Rusty White and several others, the spirit of '16 has been reawakened to something like its old-time vigor. The Class owes a good deal to these 'moving spirits' and the secretary takes this opportunity to thank them for their efforts and success."

Early in January a letter went out from Sandy Claussen to many classmates announcing a meeting to be held at the Engineers Club in Boston on January 20. About twenty-three men attended and letters from nearly twice that number were received and many of them read. All were anxious to see Class affairs brought back to normal, after the necessary lapse during the war. As a first step toward this end a temporary executive committee of five members was nominated to take over the affairs of the Class and to hold a new election. Nominations were made for each one of the vacant offices. The executive committee sent out the ballots to every known member of the Class and were delighted to receive over 190 returns, as many as were cast in the elections in both our junior and senior years. All but one vote confirmed the action taken in holding an election and the following officers were announced as in office:

President, William J. Farthing, El Paso, Texas; (office never vacant). Secretary-Treasurer, C. W. Lawrance, Auburndale, Mass.; Assistant Secretary-Treasurer, E. H. Clarkson, Jr., Charlestown, Mass.; Alumni Council Representative, H. P. Claussen, Boston, Mass.

If any one did not receive a ballot notify the secretary of your address.

It is probably well-known that the office of assistant secretary-treasurer was made vacant about a year ago by the resignation of Don Webster, that of secretary-treasurer by the resignation of Jimmy Evans more recently, while Chuck Loomis could not take an active part on the alumni council because of his position in St. Louis. Hence our good ship needed overhauling before putting to sea again.

A second meeting within six weeks was held at the Faculty Room at the Walker Memorial on March 10. It was attended by about eighteen men living in and around Boston. They did full justice to an excellent dinner and spent another half hour discussing Class business and the reunion plans over the coffee. It was decided to hold a regular monthly luncheon downtown in Boston on the first Thursday in the month. The place will be announced each month, and all members in or near Boston should be sure to have their names on Eddie Clarkson's list to get the monthly reminder. Just address him as above. After the meeting most of those present adjourned to roll candle pins in the basement of the Walker Memorial and so finished up a very pleasant "get-together." Here's hoping more of the fellows can make the next one. Don't forget the date, the first Thursday in every month. If you're in Boston get in touch with Eddie Clarkson, telephone Charlestown 681.

On February 5, Miss Constance Frances Nightingale, daughter of Mr. and Mrs. W. G. Nightingale of Providence, R. I., was married to Charles Salisbury (Saul) Makepeace, II, at All Saints Memorial Episcopal Church. Among the many Technology men present, 1916 was represented by the following: Hovey Freeman, Henry Shepard, Pansey Parsons, Dick Hunneman and Sandy Claussen. The ceremony was most impressive and a brilliant reception followed at the Nightingale home. Both Saul and his bride are enthusiastic golfers and yachtsmen and it is said that their romance had its beginning in friendly competition on the links. Nineteen sixteen sends its most cordial wishes for health and prosperity to Mr. and Mrs. Makepeace.

Charlie McCarthy sends in some more real news from Washington. He announces that Obie Pyle is passing around the cigars to celebrate the arrival of Oden Fletcher Pyle on January 7. Obie's address is still at 3016 Calvert Street, Baltimore, Md.

The secretary himself wants to announce the arrival of his second boy, Charles Holway Lawrance, on December 25, 1920, just to show that honors are even.

Ralph Fletcher writing from West Chelmsford, Mass., sends an article written by C. R. (Rodge) Lord on "Glimpses of Italy." Rodge points out that Italy is planning to free herself of the necessity of importing coal by intensive development of her enormous hydro-electric resources from the Alps and Appenine Mountains. He also discusses roads and road building, illustrating his article with interesting pictures.

Dave Patten is an efficiency engineer with the title of superintendent of production with the Famous Players-Laskey Corporation in Long Island City, N. Y., "The Great Crator of Human Emotion." Anybody want a job as an assistant?

Brad Stetson, I, is still in Pottstown, Pa., now working for a bridge company (name illegible) as a designer. He has been married since 1917 and has been elected president of the recently formed University Club of that town. According to Brad they are starting out to wake up the town, or city, along educational lines, offering college scholarships, etc.

A letter from Bill Shakespeare tells that he is in Peekskill, N. Y., where he is putting in a couple of months in the plant of the Standard Textile Products Co. He left the Edison Co. last fall. His temporary address is 188 Union Avenue, Peekskill, although his home address is unchanged.

Hovey Freeman writes enthusiastically about "the grand old get-together in Boston" (the first one). Here's hoping you can make the trip again and often Hovey.

H. F. Dodge writes from New York city:

"For years and years I've been plodding along with the Western Electric Company's engineering department, with time divided between Hydrophone Sound Ranging Systems for harbor protection and the improvement of the acoustical characteristics of telephone instruments. The line of activities here is generally considered a potent agent in converting the degree of S.B. to D.P. (d—physicist). Columbia University offers graduate

courses for engineers with limited spare time in New York — I find myself head-scratching over the peculiarities of the Functions of a Perplexed Variable during odd moments.

Mills, '16, and Clarke, '16, are serving time here and may be seen entering the works between nine and ten any morning except Sundays.

I understand Burnap is running around loose on free passes to stage entrances in the city — his excuse is the study of stage lighting effects. Take it any way you like.

H. A. Hands still enjoys the murky atmosphere of Williamsburg, Pa. His present duty in life tends toward the development of heating devices for the Westinghouse.

E. R. Mellen is still Jersey-wise, associated with the Weston Electrical Instrument Co. His line on automobile meters enables him to offer good tips on the best cars in the market. Any car is good that uses his instruments.

E. A. Ekdahl is still serving a sentence in Shanghai, commanding a gang of coolies and acting the role of chief engineer on new construction work. His reports of New Year's Eve in China fail to tally with local observations."

Ed Hanford, XIII, left the service of the United States Shipping Board in May and is now connected with the Electric Boat Co. in New London, Conn., in the designing and estimating end. The company is doing all of the designing for the Submarine Boat Corporation and for the New London Ship and Engine Company.

Howard M. Smith, Jr., is also with the Electric Boat Company in New London, Conn. — Jim Ralston is associated with an automobile parts company in Yonkers, N. Y., in production work. — George Repetti is sales manager for the New York district for the Dorr Company, manufacturers of mining machinery. — Emil Landres is assistant superintendent of the United Piece Dye Works in Paterson, N. J. He married *une demoiselle française* last year. — Dutch Gaus married last fall, is a sales engineer with the American Well Works, New York City. — Monty Lovejoy is learning the fire insurance business from the inspection end in New York City.

Don Webster has left the United States Rubber Export Co. and is now with W. B. Richards & Co., industrial engineers and accountants, 71 Broadway, New York City. He is living at the Technology Club, 17 Gramercy Park. — Merrick Monroe is in the New York office of the Pittsburgh-Des Moines Steel Co. of Pittsburgh, as a contracting engineer. From June, 1916, to November, 1916, he was a transit-man employed by the Cumberland County Power and Light Co. of Portland, Maine. From November, 1916, until September, 1917, he was with the company with which he is at present connected, as a draftsman and as an estimator and designer in the Pittsburgh office. In the fall of 1918 he attended the Engineer's Officers Training School at Camp Humphreys, Va.

Arthur K. Wells has left the Acme Wire Co. in New Haven, Conn. He is now connected with the Thompson & Lichtner Co., consulting engineers, and is specializing in industrial management at 136 Federal Street, Boston, Mass. — Flipp Fleming is in Akron with the Goodyear Tire and Rubber Co., where he is superintendent of production of small tires in their new, up-to-date plant. Flipp can make tires as fast as Henry Ford can turn out his cars.

Hal Gray is also with the Goodyear Company in the interplant relations department, according to last information. Hal recently returned from a three years' stay in France, where he represented his company in keeping close contact with the needs of the American Expeditionary Forces in tires, balloons, gas masks and other rubber products and in assisting in the export office in Paris, since the war. Hal is glad to be back.

M. A. Gillis is still a member of the Army of Occupation and is stationed at Coblenz. He expects to be returned to the United States within a short time. — S. R. Berke is a consulting engineer in Boston with rooms at 330 Old South Building on Washington Street.

Mrs. Ernest W. Bowditch writes from San Ysidro Ranch, Santa Barbara, Cal., that her son Bill Bowditch is in Calcutta, India. Address E. 4 Clive Building. He is not expected back in the United States for about two years more.

G. P. Allen wrote recently that he and a partner are running the Austin Hotel, an all-year inn at Daytona, Fla. He is planning to take his vacation in June so as to attend the five-year reunion. We wonder if any one is coming from any place farther away than Daytona.

Robert E. Miller, Jr., ex-'16, has changed his permanent address to 9 Highland Circle, Naugatuck, Conn. He is at present engaged in chemical engineering research for the United States Rubber Co. Here's hoping that you can take in at least some of the festivities at reunion, Bob.

Kem Dean writes the following from Houston, Texas, where he is permanently located in the cotton business:

"Everything is the best ever with me. As far as I know, Bill Farthing is in El Paso, Texas, but I have not seen him for about three months. Leve Lawrason is here with me and we are figuring on being in Boston in June; pretty sure I will be anyway."

A letter from George Randolph tells of the death of his son George R. Randolph, XIV, on February 3, 1921 at Pittsburgh, Pa., of typhoid fever and pneumonia. At the time of his death he was the representative of the Warner & Swasey Co., with a bright future ahead of him.

The deepest and sincerest sympathy was extended in behalf of his classmates, by H. P. Claussen, chairman of the executive committee of the Class.

Alexander Martin, Jr., VI, writes the following from Portland, Oregon, to Sandy Claussen:

"My dear Claussen: Just about a month late with my ballot which I am forwarding at once. I have had your committee letter lying around but have been so blamed busy on valuation work with the Portland Railway Light and Power Co. and hopping it nights on dances, parties, theatres, etc., that I didn't realize so much time had elapsed. It was not because of lack of interest, however, as I think your plans are fine, great dope and just what we need. We want a good committee in Boston, not somewhere else, as that is surely the center for us, where we can get the dope into the Tech REVIEW right off the bat. The men who are quite a distance away should lend their support and I for one am right behind you with pen and ink if not with presence.

I saw J. W. Barker at the Union in Paris, our secretary, George Gibbs, Kidd Hall and had a few minutes with Buxton at headquarters in Bordeaux. Buch was breezing to some camp and had a hurry up call for a transport. That was in May, but I didn't get away until the middle of July. Luckily I got a company at Brest, steered them to Newport News, then another bunch to Camp Lewis, then a leave and was discharged August 30, 1919, at Camp Devens as first lieutenant, Signal Corps. On return to Portland after a look at the old place and some pifs and a visit in New York I got a nice fat job with the Portland Railway Light and Power Co. and have been sawing wood ever since in trying to get some system into a dilapidated and much neglected valuation record.

Last October I took about the stiffest general engineering exams. for the United States Navy Civil Engineer Corps. Last month I received notice I had qualified for a permanent appointment and so now am looking for a commission any day. It will be lieutenant (j. g.) and carries the title of assistant engineer with pay of the rank. So I'll be out globe trotting before long. Will keep in touch with you all, however, and my home address will reach me until I can give you a more permanent one and know where I will be located. Best of luck to you all. *Alex Martin, Jr.*, 618 East 13th Street N., Portland, Oregon."

"News comes from Australia of the announcement by Mr. and Mrs. Earnest Maxwell Mason of Sydney, New South Wales, of the engagement of their younger daughter, Edna Burford Mason, to Edgar Louis Kaula of Somerville. Miss Mason is the granddaughter of the late Colonel W. H. Mason of the Bombay Staff Corps, who served with distinction during the Indian Mutiny, the China War and in the Punjab.

Mr. Kaula is a graduate of the Massachusetts Institute of Technology, Class of 1916, where he was prominent in dramatics. During the war he served with the American Expeditionary Forces as lieutenant of field artillery. At present he is connected with the Texas Company, Australasia, Ltd., at Sydney."

We note with interest the attempt of the Home Office of 1917 to shanghai our able skipper, Chuck Loomis, to their outfit, as they tried to do in the last REVIEW. We appreciate the compliment paid 1916 in trying to strengthen their organization by getting our men. — The Alumni Office has a rule that a man is listed with the Class he graduates with, but may be associated with any other Class he chooses, merely by writing in to that office or to his Class secretary. If you are not correctly listed in the Alumni Register or are receiving sixteen "dope" please write the secretary at once.

The secretary recently received announcement of the arrival of a son and heir to Mr. and Mrs. Charles Wheeler (Chuck) Loomis in St. Louis. We certainly extend our congratulations to the parents and a warm welcome for the young gentleman to Technology circles.

THE REUNION

Nineteen Sixteen's long-looked for five-year reunion is coming about graduation time this year, June 10-12. It is to be the biggest Class activity pulled off since the days the final "notices" were sent out; since the telephones echoed Tech's cheers from coast to coast; since the great pageant and mammoth celebration that accompanied our graduation. At that time five years looked a long way off. Today it is almost here.

It will be the best time for all of us to see the new "Colossus on the Charles," a powerful institution in war and in peace, and already outgrowing its greatly increased facilities. You can see the new shops and "labs" your successors use. You will renew your youth with old pros. again. Best of all you will see your old pals who have gone out and conquered and their families. They are looking forward to seeing you and yours, too.

Be sure to be there, if you have to mortgage the Ford for another year.

Into two or three days your committee is compressing a whole week of "get-together," revelry and joy. Its memory will linger like a fiery diamond, sparkling in a vault. The reunion committee has many things up its sleeve for your entertainment and diversion. They will be greatly helped by your telling them that you are coming. Don't let them assume that you are coming or are not coming if they do not hear from you — write anyway — and send in further suggestions.

On Friday, June 10, the early ones will have a chance to register at the '16 Bureau, and inspect the 'stute, and the Walker Building, the athletic fields and — (the Lenox). For Friday evening the committee has something up its sleeve, to be announced later.

On Saturday, bright and early, the reunion begins in earnest and we expect to have a house party, where we can combine boating, bathing, golf, tennis and have our field day. We will be by ourselves, free from intrusion, where we can play baseball, and have our picnic with all the joy and revelry of olden days.

And the family is to come too, if you can bring her or them. The old classmates want to see them too, and special provision is being made for their care and entertainment.

Most of all, don't forget the date and write the Class secretaries as soon as you can. We all need *you*.

1917

1917 HOME OFFICE, Room 3-208, M. I. T.

Some time ago Doctor Allan W. Rowe, '01, Secretary of the Alumni Advisory Council on Athletics, spoke before the Alumni Council with reference to obtaining adequate support for Institute athletics. The money raised from the undergraduate "dues," as they were known in the days when the Class of '17 was an undergraduate organization, does not now produce enough revenue to properly support the growing number of demands and athletic interests. With the idea of obtaining support for athletics on the part of the alumni, as is the case in practically every other college worthy of its name, he asked the members of the Council to take up the matter with their respective Classes and see if an annual endowment system could not be established. The amount proposed was \$50 per year, per Class, and as customary the Class of 1917 was looked upon as the most likely candidate to start the ball rolling. The Home Office figured that the men who should first be approached were those who had actively participated in athletics as undergraduates, and with this in view a mailing list of eighty names was obtained and letters were sent to all men who had been members of Class or varsity teams (It may be that one or two men were inadvertently overlooked, and if any one feels slighted by not getting a letter, contributions may be sent in addressed to the 1917 Home Office, Room 3-208, M. I. T.). To date \$56 has been raised and turned over to Doctor Rowe.

With the exception of two of the older classes, where a single gift of money was made by an individual in the name of the Class, we are the only outfit which has put its name on record as behind this movement. As usual, it is expected that a number of others will follow our lead. In fact, we understand that the Class of 1916 is at the present time trying to get up enthusiasm enough to start a drive patterned exactly after the plan which we successfully worked.

The names of the men who contributed to the fund are: A. K. Althouse, M. C. Brock, Arthur R. Brooks, William A. Clark, E. W. Curtin, J. W. Doon, A. P. Dunham, F. V. du Pont, Robert C. Erb, Augustus P. Farnsworth, R. N. Gay, Stuart W. Gurney, B. T.

Hall, Lucius T. Hill, R. O. Loengard, L. L. McGrady, J. Sherry O'Brien, F. P. O'Hara, Edward W. Rounds, E. D. Sewall, G. Radcliffe Stevens, Neal E. Tourtellotte, D. A. Tutein and I. W. Young, Jr.

In our letter we only asked for a dollar or two, but some men sent in \$5 and so the mark was reached and a number of interesting notes came in at the same time.

Eenie Curtin stated that he thought "the Class ought to be able to raise \$50 per year," and the Home Office begs to say that it humbly concurs and feels quite sure that about a year from now, when we go after the \$50 due in 1922 we won't have any trouble.

Frank O'Hara, writing from the St. Louis branch of the United Drug Company, trusts that the "Class will be able to get their quota in a short time" and, says he, "will be glad to have you call on me for any contribution necessary in the future."

Deke Young says that he is "heartily in favor of any move which will ultimately place M. I. T. athletics on a higher plane. We all know that the student body as a whole is in a state of coma in this direction, but I feel that every man who in any way was ever connected with athletics will come across every year, I would suggest that pledge cards be sent to all former Tech men who were members of teams or managers, including Class day teams. Two dollars per year from each should more than net \$3,000 and then there will be an ever increasing number from each year's graduating Class."

It may be necessary, if some of the other Classes don't come through, to adopt Deke's suggestion and approach the men in the Class who did not take part in athletics in order to make up the deficit. By the way, Deke is sales manager for the F. A. Manufacturing Co. for the Middle West. They make a guaranteed never-to-wear-out doormat on the Course XV idea and Deke expects to install them on every doorstep between Duluth and New Orleans.

Jack Wood simply enclosed a blank sheet of paper, or we should say, a neatly engraved letterhead of the "Comstock-Wood Co., Inc., Pearls, 661 Westminster Street, Providence, R. I." For the information of all concerned, and some who are not, it might be well to submit a word of explanation, that Jack is manufacturing artificial pearls and not the real article. However, inasmuch as we have seen his samples the Home Office recommends them to any of the worthy members of the Class who are feeling the present money stringency and at the same time desire to keep up appearances of the good old days.

Dutch du Pont sent in his check with no comments and Bill Clark forwarded "a few pennies to help the poverty-stricken athletes."

Dex Tutein followed Jack Wood's lead and sent in a sheet of stationery with his check. However, it is only fair to Jack to mention that Dex' letterhead was not engraved and that he is dealing in pig iron, coal and coke — the real articles, not artificial stuff.

Bob Erb wrote from the McElwain Company at Newport, N. H. and Loosh Hill, who, we happen to know, is with the Boston Belting Company, simply sent in an envelope with a check enclosed.

Sherry O'Brien enclosed a brief note with his check saying that he had bumped into Enos Curtin, also L. L. McGrady the other day. Sherry, we understand, is now running the Middle States Oil Corporation with offices at 347 Madison Avenue, New York.

According to rumors, sometime ago Sherry put this oil company on the map but we have been unable to learn the details.

Brick Dunham says, "Wish I could send more. That Hockey Team is fine." Brick is still out with the Walter Baker Co.

We observe, from Malcolm Brock's contribution, that he is assistant to the general superintendent of the Goodyear Tire and Rubber Company, which we think is worthy of great congratulation.

Nig Sewell writes from East Angus, Quebec, where he is located with the Brompton Pulp and Paper Company, "I am enclosing my check, which is in Canadian funds, but by the time the bank takes off the exchange, etc., there may be a couple of dollars left. We are having a very mild winter; so far have had only one day down to 30 degrees below. A few others have been 10 to 15 degrees below, but nothing very cold. Best regards to the gang." As a postscript Nig adds, "I hear Ed Polley, II, '17, is married and has come up here to Iroquois Falls, not far from Moose Factory, where the balloonists landed, to work with the Abitibi Paper Co. The 700 odd miles separating us makes it impossible for me to see him very often."

Jimmy Doon is still making bicycle rims in Henniker, N. H. He says, "Getting back from a Washington's Birthday vacation I found your letter with Allen Rowe's report and

am accordingly sending a small contribution. I expect to be in to see you shortly, and as I've got a pile of work ahead, I'll just send my regards and say au revoir." He hasn't shown up yet.

The following interesting monologue was received from Headquarters, First Pursuit Group, Kelly Field, South San Antonio, Texas: "Enclosed is one check for one seed complete, for the irresistible H. O. and the 1917 supplicating crew. Pity the poor Orphing Athalettuce in her dire necessity and need. She ought to be worth just about one seed, especially after Doc Rowe's pitiful plea for help. In the words of the famous old song, one might reasonably shout: 'I'll buy her flowers!' Here's hoping you get all you need to help the good cause along, as far as '17 is concerned, and my personal regards to any of the crew still around within hailing distance. I hope you are all freezing in Boston today. The temperature is only about eighty-eight here in San Antonio, at this writing. See you later! Signed, RAY BROOKS."

What is more important, the following was in the lower left-hand corner: "Enclosed check."

Neal Tourtellotte addresses us as "Most Honored Sirs: Attached herewith my small stipend towards relieving the athletic financial stringency which apparently exists at the present moment. I wish I could give a lot more. I remember, only too well, the trials and tribulations we used to have in getting enough money." Incidentally, Neal is with the Waterfront Employers Union of Seattle: Address, 1220 Post Street, telephone Main 5618. He says that he has recently been "shifted to the problems of decasualization. Decasualization as they see it here means quite a few problems, as follows: Limiting the supply of labor to the minimum amount; for the rush periods working up a reserve force (from sailors' unions, etc.); perhaps working out even a minimum wage for men who are now hired on the hour-basis, etc." The foregoing will prove to be a most interesting piece of news to a number of members of the Class who always thought that Neal would, sooner or later, drift into politics, following up the splendid start he made in that line on the *Technique* Electoral Committee. In response to a special request from the Home Office we got the following from him:

"In your recent epistle, you ask the why and the wherefore of the title above: The Waterfront Employers Union of Seattle. It is a fighting name arrived at during the days when the employers on the beach were in constant warfare with the unions of stevedores, truckers, etc. So they decided to have a union of their own — a union of employers. Lately the employers have had a change of heart though and have decided to make every effort possible to get on a 'peace basis' with the men. With this idea, they proposed to the men that they mutually establish a plan of 'Joint Organization Through Employee Representation' more familiarly known as a 'shop committee' plan, which was accepted by the men. At this point, I climbed aboard. In carrying out this plan, there was need of extensive investigation of hours, wages, working conditions, etc. The employers hired a staff to do this — yours truly being among those present. My particular phase of the work is the decasualization of longshore labor, *i.e.*, an endeavor to remedy the present great turn over of the labor; to work out if possible some gang system of hiring instead of the haphazard picking of men as at present, and other personnel administration work. It is most interesting."

This is the *kind of stuff* we want for every issue.

Rad Stevens, who is engaged on time work now, with the Elgin National Watch Company, at Elgin, Ill., writes as follows: "Will you ever stop yelling for money for something or other? What's the matter, is Rausch running the athletics again? Yes, I'm out here at the above address — can you imagine me living in a Y. M. C. A. — helping to make the best watch on the market — Elgin. Haven't been much help yet. There are three other Tech men here of years gone by and we see quite a lot of each other. It's not quite such a dead town as you might think, for it is the greatest section of the world for Home Made Wine — nuf ced. Best to the bunch."

The rest of the contributors did not see fit to send in any special note with their contribution and inasmuch as they have been good and faithful to the idea, and ponied-up their due bits, it will not be the policy of the Home Office to criticize, but we must note that A. K. Althouse sent a check on his firm instead of a personal check, and inasmuch as he is in the coal business it seems only fair to assume that Uncle Sam is now paying part of the costs of athletics at Technology.

The annual alumni dinner found the Class of 1917 in pleasing evidence as usual;

the roster being: F. Bernard, B. M. Bond, H. V. Chisholm, H. C. Clayton, S. K. Cooper, C. M. Dean, John M. DeBell, P. A. deMars, A. P. Dunham, R. H. Eaton, Harrison P. Eddy, Jr., S. W. Hyde, H. N. Keene, S. M. Lane, Clifford E. Lansil, Paul C. Leonard, Harold E. Lobdell, R. W. Logan, J. F. Maguire, L. L. McGrady, H. L. Miller, Thomas F. O'Brien, Harold F. Powers, Stanley S. Robertson, L. P. Sanborn, R. H. Sawyer, W. B. Strong, W. F. Tuttle, and W. G. Whitman. Johnny Holton excused his absence as follows:

"Sorry that I will not be able to attend the alumni dinner tomorrow night and help old 1917 hold her supremacy as she always does at such occasions. But you can rest assured that there will be a representative of the Class of 1942 yelling his lungs off for '17.

"NOTICE: 1917 Nursery Bulletin — Admitted to Membership John Hill Holton, Jr. Date: November 30, 1920. Weight: Six pounds and eight ounces. Future occupation: Already in training for 1942 cheer leader."

Johnny also informs us of the engagement of Miss Edith J. Wells, Smith, 1916, to John H. Babbitt.

As soon as the railroad raise in rates was definitely assured, Johnny returned to his old outfit, the Pennsylvania Railroad, and has headquarters at Akron, Ohio. — Jimmy Wallis is selling coal machinery in Illinois for the Sullivan Machinery Co., and dropped in at the Home Office in the course of a trip east to a sales conference at the Newport, N. H. factory. — Walt Beadle has transferred to Philadelphia with the P. R. T. We had our doubts as to what the "R" stood for, but expected that Walt would make the company live up to its name. Later we learned that it means "Rapid Transit" and that reminds us that Phil Cristal is also in the street railway business in Cleveland.

The advance notices on the Hoover Invisible Guest Dinner, held at the Institute on February 21, at which William B. Poland, '90, who was Hoover's right hand man in Europe, was to speak, so impressed the local seventeeners that special tables had to be reserved for the Class. Mr. and Mrs. Ted Bernard officiated as hosts for the crowd on this occasion. As a result, Certificate 676, European Relief Council, has been filed in the archives of the Class. Names of those attending were not given out for publication.

The *Tech Engineering News* prevailed on Walt Wood to concoct an article on industrial engineering for its February issue. Walt showed clearly the function of the industrial engineer and the importance of the human factor in industry. His article was too technical for the Home Office to fully appreciate but it was probably very interesting to members of the M. I. T. Brown Bag Club who still use the Boston and Albany and New Haven as in pre-bellum times.

The following, from a recent issue of the *Transcript*, represents all the casualties of the last quarter, as far as we have been able to ascertain:

"Miss Louise Hill, of 40 The Fenway, younger daughter of the late Mr. and Mrs. Warren May Hill (Mary Carney) was married at noon today to Jules Louis Wettlaufer, of New York, son of Mrs. Dora B. Wettlaufer of 390 West End Avenue, and the late Otto Wettlaufer. Miss Hill's engagement to Mr. Wettlaufer was announced a year ago. She is a graduate of Miss Haskell's School and of the Garland School, 1915. Mr. Wettlaufer is a Massachusetts Institute of Technology man and is a graduate of the New York University of Finance. He belongs to the Technology Club of New York and to the Chi Phi fraternity. Miss Hill is the granddaughter of the late William H. Hill, who was of the old-time Boston banking house of Richardson, Hill & Co., and she is the grandniece of the late Andrew Carney, founder and benefactor of Carney Hospital in South Boston. Miss Hill has made her home in the Fenway with her grandmother, Mrs. H. M. Carney. The marriage ceremony took place at St. Cecilia's Church, Back Bay, which was specially decorated for the occasion with southern smilax, palms, lilies and white narcissus effectively arranged. Frank Chever Nichols of Swampscott, brother-in-law of the bridegroom, served as his attendant best man, and the group of ushers included: Spencer R. Hill of Boston and Donald M. Hill of Waban, both of whom are uncles of the bride; T. A. D. Fessenden, also of Waban and Thomas D'Arcy Brophy of New York."

The other day we received a call from Bill Hunter who, as before noted in these columns, has since the war been enduring the wilds of Shirley, Mass. (although he lives in Leominster), and has been contemplating the ruins of Camp Devens. Bill is working for the President Suspender Company and his call on us was really to say good-bye, as he is leaving on a six months' journey which will take him through the South Sea Islands to Australia. After a business tour of Australia he expects to sojourn in New Zealand and then return to the States, stopping off for several weeks in the Canadian Rockies and

Yellowstone Park. This latter is only tentative, however, as he may return by way of Suez and spend his vacation in France and England. As far as we have been able to learn this is the best job of any man in the Class and we envy him his prospects.

Our Philadelphia correspondent sends in the following:

"It has been my privilege to observe a chosen few of our illustrious Class wandering about the City of Brotherly Love. A few days ago I had the difficulty of passing Fritz Althouse on the street — I say difficulty, because his gigantic figure swollen up by a monstrous bankroll quite crowded Philadelphia — in fact, I am told that Fritz is in the coal business with W. D. Althouse & Co. I recently saw Dexter Tutein with a charming young lady having lunch in the Bellevue. Dexter is with E. Arthur Tutein, Inc., and comes to Philadelphia on business quite often — now and then business for our most expensive hotel, but that is a successful man's prerogative. In connection with successful men, I recall a companion of my 'Fresh year', Pat Wettlaufer. A sophomore was his limitation at one time, but now he represents one of our promising manufacturers. He is with the A. R. King Shoe Company, although he doesn't wear the shoes he makes. Perhaps you will remember Don Kendall. He started off with our famous Class, but I think he was declassified after the first exams. I believe he visits our Quaker City three days a week on research work. Of course, research work covers a multitude of sins, but no one can blame him for his ideas. The Tech Musical Clubs rendered a splendid concert on the twenty-ninth of December. I looked for 1917 men, and found Stuart Gurney, not unaccompanied. He is located with the Barrett Manufacturing Co., and applies what he remembers of Course X. I forgot to mention my experience at Fairmont Inn not so long ago. Fairmont Inn corresponds to the 'Haywood' only a little more decent. I met Justin Basch, Sam Clayman and H. F. Goldsmith. Let me remind you that this is a prohibition country, for they conducted themselves discordantly. As for myself I can only say that business is in such a slump, that dissatisfaction is my food, so I have drawn up a set of resolutions which I present for approval: (Censored)."

As is customary in all regular and duly constituted publications, we close with a few comments on our exchanges, which during the last quarter have been two in number.

Volume One, Number Three, of the *Masco News*, published by and for the employees of the Massasoit Manufacturing Company, L. L. McGrady, editor. This is a good four-sheet affair "Free to Employees, Extra Copies Five Cents," which as was always Mac's custom at the Institute, is patterned after *The Tech*. It has a lot of ancient cuts, a real "colyum" entitled "Masco Yarns" and its sporting page shows evidence of being run by a future Grantland Rice. Evidently the worthy editor is aware that the war is still on, for he prints a scarehead about the "Kaiser's Big Mistake," and as those of the Class who have been around Boston during the last year well know, a requisite of a good metropolitan bugle in this territory is a bank scandal on the front page. We note that Mac discourses on page 1, column 3 about "The Bank of Health." Seriously, this edition is O.K. and any one interested should write Mac to be put on the mailing list. Just address him at Fall River, Mass., but do not tell him that you saw this ad or you may not get any papers.

Secondly, we received the January, 1921, issue (out only a month late) of the *Bulletin* of the Technology Club of New York, edited anonymously by Penn Brooks. This is likewise a good sheet, but it runs jokes from ancient copies of the *Voo Doo*. It is only fair to add that they were also old when *Voo Doo* copied them from *Judge*. Parenthetically, these same jokes may account for the recently involuntary bankruptcy of *Judge*.

One commendable thing about the *Bulletin* is that it mentions at least one 1917 man on each page. On the first page it mentions E. P. Brooks, '17, as a member of the Board of Governors, on page 2 it mentions E. P. Brooks, '17, as a member of the entertainment committee and on pages 3 and 4, after a careful perusal we can discern his spirit written between the lines. Other interesting dope in the issue is that Bob Scannel '17, won the cash in the bridge tournament and that other prizes went to R. J. Miskowsky, '17, and G. N. Lovejoy, '17. The latter is now on the club membership committee, according to page 3, and on the back cover it appears that A. K. Althouse, '17, E. B. Payne, '17, G. N. Lovejoy, '17, and F. L. Ford, '17, are among those recently elected to membership in the Club.

More of which later!

1918

D. M. McFarland, *Secretary*, 626 South High Street, West Chester, Pa.

Professor Schell has very kindly requested that the Course XV men report progress. Here are the replies to his letter:

C. L. Bassett is assistant to the production engineer at the Gorham Manufacturing Co., Providence, R. I. "where the world's best sterling silver is made." His home address is 8 King Street, Taunton, Mass. — L. P. Marshall is assistant to the consulting engineer of the American Radio and Research Corporation, Medford Hillside, Mass. — E. W. Huckins is working on the valuation of gas and electric properties about Philadelphia for Stone & Webster, Inc. He is in the division of construction and engineering with headquarters at 147 Milk Street, Boston, Mass. — P. W. Howard is production manager of Peter Gray & Sons, Cambridge, Mass., having been with this firm for over a year. — A. F. Howard is in charge of the industrial engineering department at Lever Brothers Company, Cambridge, Mass. — From Hartford, Conn., A. C. Litchfield reports the rubber tire business as being very slack. He is with the Hartford Rubber Works Co. and lives at 151 Linnmoore Street. — J. T. Sattels is with the Electrical Products Manufacturing Co., 69 Sprague Street, Providence, R. I. — Eli Berman holds the license of first assistant engineer of ocean vessels. He had just returned from a trip to South American ports to his home, 440 Harvard Street, Brookline, Mass. — P. M. Strang is working with G. S. Murray, '18, under Mr. C. H. Fish, treasurer and general manager of the Cellulograph Engineering Corporation. This company manufactures self-lubricating bearings. — H. D. Manuelian is located in Lowell, Mass., as an instructor of Industrial Organization and Management for the University Extension of the Commonwealth of Massachusetts.

H. E. Collins is with Harry M. Hope Engineering Co., 185 Devonshire Street, Boston. From November, 1919, to August, 1920, he was in St. Louis on the erection of a factory for the United Drug Co., a \$3,500,000 contract. From August, 1920, to November, 1920, he traveled over the eastern United States expediting equipment for the Seamless Rubber Co., New Haven, Conn., a \$3,500,000 contract. Collins tells us that Jule Howe does not live in Newton Centre but he takes the 8.09 train from there nearly every morning. In Jule's report we can see the results of this.

Jule Howe is assistant to the manager of the Boston Garter Co. and seems well pleased with his position. He expects to be married in the course of a few months, which tells us why he spends so much time in Newton Centre. — F. B. Philbrick is employed by the Gamewell Fire Alarm Telegraph Co., Newton Upper Falls, Mass., on engineering work. — Johnny Clarkson is assistant to the general manager of the Miller Candy Co., Heath Square, Roxbury, Mass. — T. S. Fogarty is with Cobb & Drew Inc., manufacturers of rivets, tacks, nails, cotter pins, and washers — learning the business both in the office and factory. — W. R. MacLeod writes from 126 Walker Street, Lowell, Mass., that he is with Otis Allen & Son Co., wooden boxes and packing cases. — A. W. Joslin, I, writes a very interesting letter from Cuba. He is with the Eastern Cuba Sugar Corporation at Central Stewart, Stewart, Camaguey, Cuba, in the department of railroads and civil engineering with the title of assistant engineer. In May he expects to visit Boston on a vacation so those 1918 men who are thirsty might send him their orders.

On January 26, 1921, at the home of the bride's parents in Melrose, Miss Mildred M. Stevens, daughter of Mr. and Mrs. Eugene Mayo Stevens was married to Mr. Edgerton Goldthwaite Polley of Bangor, Me., son of Mr. and Mrs. Henry A. Polley of Waltham. Mr. and Mrs. Polley will make their home at Iroquois Falls, Ontario. The bride is a graduate of Miss Fifield's School in Malden. — Mrs. Frank E. Cutter of Main Street, Concord, announces the engagement of her daughter, Miss Elizabeth Brooks Cutter, to John Wheeler Clarkson, son of Mr. and Mrs. Edward H. Clarkson of Newburyport. — The engagement of Miss Blanche Gladwin Gilliatt and John Langdon Parsons has been announced. Miss Gilliatt, whose home is in Watertown, is a graduate of Boston University, 1919.

Just lately the secretary saw Bob Van Kirk in Wilmington. Bob is still with the du Pont Company. His address is Colonial Hotel, Pennsgrove, N. J. — Bill Ryan writes from Bangor, Me., that he is developing into a shimmy artist. In his spare time he does some work for the Eastern Manufacturing Co. in connection with the Course X experiment station. Bill recently made a little business trip to Cleveland where he saw Dick Wilkins

now a very happy married man. Tom Kelly could not spare Bill a date but reported himself well over the telephone.

The following announcement was received March 21:

"Mr. and Mrs. L. E. Pickett announce the marriage of their daughter, Frances Maple, to E. Olney Herman on Friday, March 11, 1921, at St. Louis. Mr. and Mrs. Herman will be at home after March 11, Crunden Martin Apartment, 303 Cedar Street."

From the *Boston Transcript* of February 26, we learned that Winthrop E. Nightingale, I, has been elected assistant professor of civil engineering at the School of Engineering, Northeastern College, and will assume the position of acting director of engineering practice on April 9.

The secretary is with the Atlas Powder Co., Tamaqua, Pa., in their experimental laboratory. Address: Atlas Club, Tamaqua, Pa.

1919

E. R. SMOLEY, *Secretary*, 17 Gramercy Park, New York, N. Y.

P. D. SHEELINE, *Assistant Secretary*, 55 Magazine Street, Cambridge, Mass.

Although a bit late for a celebration in which the torch of the new year was ignited, the Class had a glorious evening on January 29 in various parts of the globe.

BOSTON DINNER

Paul Sheeline was responsible for the Boston fireworks at the Lenox Hotel, and he reported as follows:

"The dinner Saturday evening was a great success. We had eighteen fellows there, and for entertainment Dave Minton and Luke Walton performed on the piano and fiddle respectively. Luckily we were able to supply liquid as well as high spirits, which added a good deal to the zest of the evening. After dinner a mighty snappy three-round bout between Captain Alan Addicks of the Technology Team and J. M. Cook, former champion of Annapolis but now at Technology was staged.

The following were present at the dinner: William B. Snow, 112 Water Street, Boston, salesman of coated papers, Reversible Collar Co. — Guy Davis at Technology. — Ervin M. Kenison, 105 Mt. Auburn Street, Watertown, Mass., in force engineer's office, New England Telephone and Telegraph Co. at 119 Milk Street, Boston. — Arthur C. Kenison, 185 Devonshire Street, Boston, specializing in corporation and personal insurance. — Minor M. Beckett, at Technology taking Course XA. — S. Robertson Ward, 354 Tappan Street, Boston, designer of industrial housing, Aberthaw Construction Co., 27 School Street, Boston. — Carl L. Svenson, 303 Wood Avenue, Mattapan, Mass., instructor in mechanical engineering at Massachusetts Institute of Technology. — Hyman P. Selya, 31 Perry Street, Brookline 46, Mass., American Color and Chemical Corporation, South Boston, Mass. — Richard T. Cashin, Jr., 390 Howard Street, Cambridge, Mass., chemist, Essex Aniline Works, South Middleton, Mass. — Arthur E. Griffin, construction department, in charge of work at Payson Clark School, Belmont, Mass. — Wirt F. Kimball, 1483 Beacon Street, Brookline, Mass., organizing engineer, personal service in engineering. — K. M. Cunningham, 973 Massachusetts Avenue, Cambridge 39, Mass., at Technology. R. M. Blood, 20 Orient Avenue, Newton Centre, Mass., with Petroleum Heat and Power Co., 100 Boylston Street, Boston, Mass. — Russ Hubbard, 65 Washington Street, Newton, Mass., still at Technology and from all reports contemplating matrimony very seriously. We hereby present one of the remaining 1919 horseshoes and wish you luck. — Herman A. Herzog, care Young Men's Christian Association, Gloucester, Mass., plant research chemist at Gorton-Pew Co. — Paul Sheeline, care A. D. Little, Inc., Charles River Road, Cambridge, Mass.

In addition to those present I received regrets from C. F. Perkins now at South Bend, Ind.; Noel Chadwick; F. A. Baker, care Connecticut Power Co., New London, Conn.; Angus D. Douglas; J. P. Thurber; H. H. Searles; Rus Palmer, Division Traffic Engineering Force, New England Telephone and Telegraph Co.; H. C. Priest, care C. H. Howes & Co., sales engineer.

Several 1917 men complimented the outcome of the dinner in Boston. It must have been!

NEW YORK BLOWOUT

Two months rolled by to see those about New York assembled once more at the Pig and Whistle Inn in Greenwich Village on the evening of January 29. The black pine was ablaze in the proper color scheme, which by the way came all the way from Kentucky via Bridgeport. Even Sam Weller among other Charles Dickens "we know abouts" seemed to take on renewed life from behind their frames.

George Gibbs was our honored guest and he favored us with a talk on "A Corner of France". This was followed by a few remarks from Chuck Drew on the Consular Service in Belgium and Holland. Charlie Parsons rendered carefully selected latests and P. L. Rhodes gave the Class one phase of shipyard work. The party after the successful outburst at 175 West Fourth was reluctant about breaking up and did so by degrees from the final resting place—Dave Sanford's "Dug Out" at 305 West Fourth. The party regretted the absence of their worthy Class president, Don Way, who was called away to Canada shortly before the event. The following telegram which was received and read at the dinner indicates however that he was there in spirit.

"Montreal, Quebec, January 29, 1921—Rush. To E. R. Smoley, care Pig and Whistle Inn, 175 West Fourth Street, New York City.—1919 celebration in Montreal. Attendance 100 per cent. Way and Langille present."—Signed *Don Way and Will Langille*.

Notices were sent to seventy-five of the Class in or about New York City. If any of the Class were missed it would be a good plan to send their names to the secretary for future spees. The low percentage of answers also warrants a closer inspection of one's mail before waste paper basketing it.

The following were the replies received on United States one centers:

"Will be there." *H. P. Jewett*, 528 East Front Street, Plainsfield, N. J. The Jersey Central ferries apparently ceased to function on the twenty-ninth.—"Will be on hand for the Tech 1919 Class dinner." *T. M. Doyd*.—"I will be present at the dinner on the twenty-ninth. I am still located in Jersey City though find business dull. I made a hurried trip to Massachusetts for Christmas and had the pleasure of Tavener's company on the way. Saw nothing of Boston on the way. Since December I have been in charge of inspection and consequently I am putting in much time at the shop." *A. R. Ford*.—"O. K." *Otto Muller*, 263 East 19th Street, Brooklyn, N. Y.—"Sure I'll come. I missed the last dinner through an accident. Am still with the Sprague Electric Works of General Electric Company in industrial control department, designing field rheostats. Am the only Tech man in the plant. But it is interesting work, probably more so than you would believe before looking into it." *Albert B. Reynolds*.

"Count on me for the twenty-ninth of January. I have no news." *Arnold B. Staubach*, 270 Ridgewood Avenue, Glen Ridge, N. J.—"I think you can count on me. I'll be there if I have to break a leg." *Leo A. Kelley*.—"Count on me." *Schwartz*.—"Sure." *Oscar (Mayer)*.—"I'll be there Saturday night but will preserve my history for a few days." *Charlie Parsons*.—"I shall be glad to be present at the 1919 dinner on the twenty-ninth." "On that date I am going to Bridgeport but will be back on time." *Alan B. Miller*.—"Count on me for the twenty-ninth. I am doing electrical engineering work in the development and research department of the American Telephone and Telegraph. Here's hoping there will be a still bigger turnout this time." *Ark Richards*.—"Your very appropriate announcement of the big event on my calendar at hand. [The announcement was: '1919 Goes Wild'. So the *Tech* said regarding the last dinner in New York in November. 1919 will repeat on January 29.] You can count on me as one of those who will be present. Our 1919 bunch with the Western are coming 100 per cent strong according to all reports. Will send a few notes regarding my 1920 history under separate cover." *F. J. Given*.—"You can count on me to attend the next 'doins' on the twenty-ninth. Have been doing nothing unusual lately. Best wishes." *L. A. Wearer*.—"You Bet." *Fred Rasmussen*.—"Please count me in on the 1919 Class dinner on January 29. I am working with J. L. Prescott Co. as production engineer at their Passaic factory." *A. W. Prescott*. We couldn't even find Amos under the table.

Dave Sanford was present with all forces assembled, as he promised lip to ear.—Chuck Drew, now with H. L. Doherty, 60 Wall Street, New York City, replied affirmatively by letter.—"Will be there unless I am fired first. Still with the New York, New Haven and Hartford Railroad and will continue for some time apparently. There are seven Tech

men in our department (test department) and all are getting along nicely." *Robert W. Mitchell*. A pin must have dropped on the T. N. T. — "Have just received this card and am glad to hear the representatives of '19 in New York have organized, as the dinner notice would seem to indicate. Regarding the dinner, will surely try to be on hand, provided business does not interfere. Am connected with the Texas Company in Bayonne and often am late getting back to the city, but if it is at all possible will be only too glad of the opportunity to meet some of the old '19 men." *R. K. Widdons*. — Don Way on business in Canada with the Singer Manufacturing Co. pitched in nevertheless. Great stuff, worthy No. 1.

S. Allen Merselis, 218 Aycugg Avenue, Passaic, N. J. wrote: "I shall try to get there. Sorry I haven't any history to give you." — Frederick M. Lee, Captain Q. M. C., 27 Englewood Avenue, Brookline, Mass.: "I am sorry, but shall be unable to attend the Class dinner." — B. H. Sherman writes as follows: "I am sorry but I cannot make the Class dinner on the twenty-ninth. As for history it is as follows: Left the E. I. du Pont de Nemours & Co. Dye Works, November 1, 1920. Employed at Edgewood Arsenal as chemist until February 1, 1921, during which time my eyes were badly affected by war gas. Am going with the Northern Paper Mills Co. at Green Bay." — A. L. Reid, "Sorry cannot be with you. Am laid up with a bum hip. Had been hoping to be able to get out. You probably know it, if not Chuck Drew '19, is with the H. L. Doherty, Wall Street."

Louis A. Brown, Jr., "Sorry I cannot be with you. My address at present is 1519 Pulaski Street, Fort Worth, Texas." — Lan M. Quick wrote, "As usual — no can do! Sure would like to attend, but business before pleasure as the man said when he kissed his wife. Charlie Farist blew into Pittsburgh about a week ago to take a job on the faculty of Carnegie Tech. Have been to see him a couple of times. Saw Gibson a month or so ago. He is in New Kensington with the Wearever Aluminum Co. Regards to the bunch." — From Lewis S. Edgerton we received the following: "I have received several of your communications but only after it was too late to let you know my decision. I would like to be in New York for the twenty-ninth but you see they have been so liberal here at the Institute with the famous rate 'Ten' that I cannot take the chance. I came back to the Stute last year and have been there since. Will get out this year. There are quite a few of the old '19 men in the class." — From Walter T. Biggar, "Will not be able to be at the dinner. Hope you have a good crowd. Am working for James H. Fuertes, consulting engineer, 140 Nassau Street, New York City. Am at present working on a survey of the sewerage system of the City of Elizabeth, N. J." — Roger B. Johnson, Pierce Hall, Cambridge 38, Mass., writes as follows: "I really am very sorry that I have moved away from the New York region and will not be able to attend your 'wild party.' It sounds good. At present I am instructor in civil engineering at the Harvard Engineering School. Expect to get out into another job when the sailing is good. May land in New York and if I do I will be on deck for the next party." — George Irwin wrote as follows: "Sorry I cannot take advantage of these '19 dinners. History? Is this it? Am married and living in North Andover, Mass., working with the Lamson Conveyor Co." — Waldo Clark is married, living in Atlantic, Mass. — Warren A. Maynard writes: "Am married, living at 1632 University Avenue, New York City. Working in the city. Friends call me up, Fremont 6545 Ext. 25." — Alan G. Richards writes as follows: "Unable to be with you on the twenty-ninth. Am an old married man now with a youngster seven months old. My new address is care of Dunlap Tire and Rubber Co., Buffalo, N. Y." — Herbert C. Merrill, 55 Hanson Place, Brooklyn, N. Y., "I will be unable to attend the dinner January 29." — Johnny Caldwell writes the following: "I received your notice about the '19 reunion but I am afraid you had better not count on me. The way things look at present it will be quite a time before I can make New York. I sure wish I could make it because I have not seen the gang since I left school and I'm afraid they will forget I exist if I don't see them soon. Remember me to them all and I hope you all have a rare old time." — D. M. Burckett, 291 Beacon Street, Boston, Mass., writes: "Will be unable to attend the doings on the twenty-ninth. I am still attending the Stute so you see I am out of luck for attending your wild times in little old New York." — Bob Insley, McCook Field, Dayton, Ohio, writes as follows: "Sorry I can't make the 1919 dinner. Must stay here to make my three squares each day. As to myself — no news. Still cracking up aviation machinery and guessing why it cracked or suggesting new machinery and guessing why it doesn't run. Rolling away the 'pepuls' money and justifying the Liberty Bond." — Louis A. Brown, Jr., care Brown & Ruehmann, 1519 Pulaski Street, Fort Worth, Texas writes "Sorry I cannot

be with 1919 but I'll be with you in spirit. My best and sincerest wishes for you and the Class of 1919." — Ross E. Goddard, 135 Newbury Street, Boston, Mass., writes as follows: "While appreciating invitation and other courtesies extended by Massachusetts Institute of Technology Class of '19 I am not in position to accept owing to affiliation at Massachusetts Institute of Technology with the Class of '21 of which I have been a member since war service." — H. S. Hadley writes the following: "Mighty sorry I can't attend the dinner. Was abroad in 1916-17 with American Ambulance and Lafayette Flying Corps and later instructed in Aviation at Miami, Florida, United States Navy. Since the armistice have been with Otis & Co., investment bankers, as buyer of securities. Married Virginia Allison of Lonia, N. J., in May, 1918, at Boston. Best wishes for success of 1919's dinner." — G. R. Bond, Jr., 16 Maple Avenue, Pennsgrove, N. J., writes as follows: "Sorry I can't get up to the dinner but it is impossible at this time. Remember me to all the fellows. I am the only one of our Class down here now, as the axe has been swinging pretty hard. I've been transferred from Jackson Laboratory at the dye works up to Eastern Laboratory at Gillingham, where they make the dynamite. It sure is interesting work, and I hope I can stick with the du Pont Company. Am now doing research work. Would be glad to hear from any of you fellows that have a chance to drop a line."

The following notices were returned for proper addresses: T. L. Goodwin, Jr., 235 Fifth Street, Weehawken, N. J.; Shao-yu-Hung, 421 West 118th Street, New York City; C. J. Barrios, care A. L. Moreno, 50 Broad Street, New York City; G. A. Irwin, 33 West 42d Street, New York City; A. P. Ames, 319 Reid Avenue, Brooklyn, N. Y.; E. M. Howard, 85 Baldwin Street, Bridgeport, Conn.

John Stevens, X, left A. D. Little, Inc., to join the ranks as chemical engineer for the Fox River Pulp and Paper Co., Appleton, Wisconsin. Before going west he is to spend a few weeks at the du Pont Dye Works in Wilmington, Del., to study the application of dyes to paper manufacture. — Cutter Davis has been wrestling with the Massachusetts Institute of Technology team this year and payed us New Yorkers a visit on January 29.

Boston *Herald* of January 2, 1921 states:

Mrs. P. W. Knutson, Muskegon, Mich., announces the engagement of her daughter Iva Nancy to Everett F. Doten, Massachusetts Institute of Technology '19, of Somerville, Mass. — George H. Wiswall, Jr., has moved to 167 Mt. Auburn Street, Watertown, Mass.

The Boston *Transcript* of December 24, 1920 states:

From Concord, N. H., Mr. and Mrs. George B. Lauder have announced the engagement of their daughter, Mildred to Richard H. Coombs of Boston. Miss Lauder is a graduate of Wellesley College and Mr. Coombs was a member of the Class of 1919 Massachusetts Institute of Technology. — P. L. Rhodes may be reached at 50 Church Street, New York City, where he is the New York representative of the Union Shipbuilding Co. Home address 46 Center Avenue, New Rochelle, N. Y., Phone 378-W. — Arnold B. Staubach, 270 Ridgewood Avenue, Glen Ridge, N. J., wrote in for names of 1919 men in Newark, Jersey City, Montclair, Bloomfield and the Oranges, and intends to become acquainted with his classmates "to keep the spirit alive." This is highly commendable and perhaps something for you to do also. Tech man 1919! — From M. A. Michaels: "Still have twelve to fifteen seconds left. At present I am development engineer at the International Silver Co., having completed the job at Foster Merriam & Co. Interesting work with plenty of use for XV₂. But anxious to get started for myself."

R. W. Rigsby writes: "I am located in Bristol, Va., laboring in the capacity of city manager." — Some one sent in the following unsigned card from Lowell, Mass.: "I am working in the motor inspection department of the United States Cartridge Company." Roger B. Johnson writes the following: "I am obeying Professor Schell's instructions and using his postal. The lateness is due to my home address being changed from 5 Renner Avenue, Newark, N. J., to Cincinnati, N. Y. I am still instructing in the Harvard Engineering School, Cambridge. Expect to leave the first of April and go into water power work. Best of luck." — William B. Snow writes: "In reply to Professor Schell's much appreciated 'House Organ' would inform you I am now a salesman for the Reversible Collar Co., 112 Water Street, Boston, selling coated and cloth-lined papers. P. S. It was a dam fine dinner."

Wirt F. Kimball, organizing engineer, personal engineering executive service, 36 Bloomfield Street, Room 401, Boston, Mass., residence, 1483 Beacon Street, Brookline, Mass. — The following was received from Wirt: "I am sending you this dope as per Schell's suggestion for TECH REVIEW Class notes. Have recently started this service for

myself but already it promises a good future. Best of luck to you." — Francis A. Weiskittel, 2933 West Charles Street, Baltimore, Md., sends in the following: "I am located at the General Electric Company, Baltimore works in the production department, doing planning and scheduling on disconnecting switches."

From Louis Goldstein, Hartford Rubber Works Co., Hartford, Conn.: "Everything's going tip top around here, so far as I'm concerned. I've been with this company almost two years now and no kick is coming yet. We're a part of the United States Rubber Co. and we make the very best tire in the world, the Royal Cord. For over a year I have been in charge of the scrap and salvage department and we sure do *some* business. For the last few months however I've been in the superintendent's office most of the time on special work. Haven't had to make any entropy yet or to determine any autectics but do not use my precision." — John Meader, XV, is now in charge of the technical division of the foreign service department of the White Co., Long Island City, N. Y. His address is 242 West 74th Street, New York City.

E. M. Kenison writes in: "Located at 119 Milk Street, Boston, Mass. Engaged in traffic engineering work in regard to force studies for exchanges in metropolitan division of the New England Telephone and Telegraph Co. Home address 105 Mt. Auburn Street, Watertown, Mass." — Bernard S. Cohen sent in the following: "For the past two years I have been with the Montclair Water Co., as chemist and bacteriologist, and am trying to keep the pesky bugs of bacteriological fame out of the water delivered to the residents of Paterson, Passaic, Montclair and a number of other towns hereabouts. Saw T. Shedlovsky in Boston Christmas week and he insisted on giving me his interpretation of Einstein's Relativity."

Those present of the Class of 1919 at the annual alumni dinner of January 8 at the Walker Memorial were: Paul D. Sheeline, William F. Bennett Jr., D. Arthur Lundquist, Leighton B. Smith, Henry Rommer, K. L. Nutter, J. Jacobs, Merritt Smith, B. H. Southwick, F. W. Griebel, Russell S. Palmer, A. H. Blake, Arthur E. Wales and J. H. Becker.

George Wiswall writes in: "I have been in Providence with the Revere Rubber Co. since finishing at the Stute. Give my regards to any of the boys you see in New York."

Excerpt from Paul Sheeline's letter of January 10 to the New York company: "Happy Ward, IV, has a very nice young daughter of which he and Mrs. Ward are justly proud. — I ran into Jimmy Moore, another '19 man, whom you will probably remember from freshman drill. Jim is working in the cotton business and seems to think that the future of the textile industry is very promising. — I also had a letter from K. P. Ku from Shanghai China. He is with the firm of Lam, Glines & Co., Shanghai, and he says "Our firm engages in export, import, engineering and construction. I returned from the States in April to go with this concern. We are doing several engineering jobs in Shanghai and the firm is organized and manned mostly by Tech men."

The following changes in addresses were received in January: J. A. Christie, 920 Bloomfield Avenue, Akron, Ohio; E. P. Collins, 973 Massachusetts Avenue, Cambridge, Mass.; N. D. Conniers, 416 Sixth Street, Corrington, Ky.; R. L. Falkenberg, 4107 Euclid Avenue, Kansas City, Mo.; F. R. Hewes, 1545 West Babbitt Street, Dayton, Ohio; J. H. Nelson, Standard Oil Co., Hankow, China; E. F. K. Siefert, 34 Kendall Street, Lawrence, Mass.; R. S. Smith, 610 Randolph Street, Oak Park, Ill.; F. C. Spooner, 18 Lancaster Street, Cambridge, Mass.

It is with deep regret that we announce the death of Edward A. Freeman on December 13, 1920.

1920

KENNETH FELLOWS AKERS, *Secretary*, 54 Dwight Street, Brookline, Mass.

Thanks to Professor Schell of the engineering administration department, your secretary has a few more news notes than otherwise would have been available. Hence, if Course XV seems to predominate it will be through Professor Schell's efforts. I want to take this opportunity to thank you, Professor Schell, for aiding me in securing news of the 1920 crowd. The following are the results brought forward by your letter:

Monroe Shakespeare is living at 60 Melrose Street, Kalamazoo, Mich., and is employed as secretary to the president of the Shakespeare Co. in that city. — Kenneth B. White is still with Cheney Brothers, in South Manchester, Conn., as a time study man. — Heine

Haskell is with the Aluminum Seal Co. in New Kensington, Pa., in the capacity of general storekeeper. — Thomas Orchard is in Salem, Mass., taking a course with the Hygrade Incandescent Lamp Co. in lamp manufacture and making analyses of each production job. — Bud Cofren is with the United States Industrial Chemical Co., at 27 Williams Street, New York City. He is selling alcohol for that company and living at The Allerton House, Madison Avenue and 55th Street. — Stan Bragdon, as an employee of the Peerless Screen Co., seems to be making a name for himself. His business address is Westbrook, Me. — A. L. Morley is with the United Drug Co., as assistant buyer of paper and paper products in Boston, and is living at 11 Baldwin Street, Cambridge. — R. W. Case, Major Ordnance Department, is in command of the arsenal at Metuchen, N. J.

R. I. Bradley is working for his father and thinks that his chances for a good job are bright. He was with the American Agricultural Chemical Co. till Christmas, but resigned at that time. — Larry Winant is in New Britain, Conn., working for the Stanley Works, manufacturers of butt-hinges, wrought hardware, and cold steel. His work consists of time study work, shop experience and "filling grease cups." — J. E. Cassidy is with the Peter Gray Co., lamp manufacturers, working in the cost department, and thinks he may be one of the partners when he is sixty-five. — Dolly Gray is still with the United States Aluminum Co. in New Kensington, Pa., but is now an assistant in the planning department. His work covers the planning and scheduling of the whole mill. — Warren Chaffin is in the capacity of junior industrial engineer for the Szepsi Industrial Organization at 673 Boylston Street, Boston, Mass. — Luman Thurber is treasurer and office manager for the United States Vaporizer Co. at 214 State Street, Boston, Mass. — J. L. McGuigan is in the Navy Yard, Norfolk, Va., as assistant shop superintendent. — Harry Blount is with the New York branch of Fairbanks, Morse & Co. in the sales department. At present he is at the factory at Three Rivers, Mich., for instruction in the manufacture of the product, after which he expects to be assigned to a territory.

Archibald Kinghorn writes as follows from Pittsburgh:

"We have scouts in other portions of the Smoky City salient. H. W. Hills is studying the method of attack on things electrical at the Westinghouse plant. — 'Yellow peril' Farist has taken Carnegie Technology by storm and is showing the students how to make a motor do the 'shimmy'. At present he is spending most of his time looking for an apartment, as the stage seems to be more or less set for him to make a life contract with a certain party in the vicinity of New Haven. — Whittaker, who was the shining light in Course X politics is showing them how to make two pieces of steel flourish where one grew before at the American Sheet and Tin Plate Co. — As for myself I am trying to convince the Bell Telephone Co. that I am worth \$10,000 a year, and I have a hard row to hoe."

Word comes from Professor Schell's office of the following:

Fred Crapo is assistant superintendent with Hemingray Glass Co., Muncie, Indiana. — Carl Leander writes "My present efforts are along the lines of sales and sales engineering for the William C. Robinson & Son Co." — Dave Fiske is out in Cedar Rapids, Iowa, working for a meat packing house, doing mainly refrigeration work. His address is Box 415, Young Men's Christian Association. — Joe Padilla writes from Comayaguela, Honduras, C. A., that he is designing highway bridges for the inhabitants of Central America.

Just a word in closing. If any of the gang are ever in Boston they can always find their weary secretary in the "Café Des Enfants," otherwise known as Childs, in company with Ned Murdough and Harold Bugbee of our distinguished Class. The hour? Oh yes! It is twelve-thirty every noon.

I would like to take this opportunity to thank the following men for their thoughtful cards at Christmas time: Bob Mitchell, Albion Doe, Merrill Knox, Hank Pierce and Jack Coyle.

Don't forget to keep in touch with me and bear in mind that we will have a "get-together" in June at commencement time, details of which you will hear of later. Yours for 1920, "Ken" Akers.

I nearly forgot to tell the gang about a few more of our classmates but thanks to the Editor I am able to add this postscript:

George "Pierpont" Morgan has gone back to his home state of Texas to work for Stone & Webster, having been transferred from their Boston office. The burg he is located in goes by the name of Beaumont. — Fred Earle is attached to the Industrial Division,

Navy Yard, Norfolk, Va., with the duty of docking officer. — Merritt Taylor is with the Edison Phonograph Works, after spending six months in the engineering department of their laboratories. — Albion Doe is in charge of all the instructors in the shops, supervising and organizing the shop work given to embryo mechanical and electrical engineers. He also teaches Engineering Administration to the senior men, and without doubt models his course after Professor Schell's excellent one given Course XV men last year. — H. J. Williams is assistant engineer with the Maine Water Power Commission in Augusta, Me. His work is as evident along hydraulic engineering lines. — Harold Kepner is assistant sanitary engineer with the Illinois State Board of Health and is located in Springfield. — Major Sanger is still with the Infantry, U. S. A., teaching something about communications to units smaller than a division for our army in the next war. He says there are some good jobs going begging in the grades of lieutenant with captaincy in the future. — Bat Thresher is with the Eddystone Manufacturing Co. as assistant to the chief engineer. This plant is devoted to the bleaching, printing, dyeing and finishing of cotton fabrics.

Jimmy Gibson is in New York selling Burroughs Adding Machines. He thinks he has struck the job that appeals to him and we wish him the best of success. — Ring Amundsen is with the Worthington Pump and Machinery Corporation. He is designing heavy oil engines for that company. — Harold Bugbee is working with the Walter B. Snow Advertising Agency. I see him every noon for we eat together and his work is very interesting and he feels that he has struck a good proposition. — Franklin H. Blackmer is studying for the ministry in the New Church Theological School, Cambridge, Mass. — Gorham L. Cross is with the Rome Wire Co. in Rome, N. Y. He is an assistant in the time study and rate setting department. He is at present doing some special graphical and statistical work for the president of the company. — L. D. Wilson is now working for the Beacon Oil Co. in Everett, Mass. He is working with the engineering corps on the work of constructing their new plant. — This ends my short(?) postscript and remember we are to have a gathering of the Class at commencement time, the details of which you will hear of through the mails later. I thank you!

